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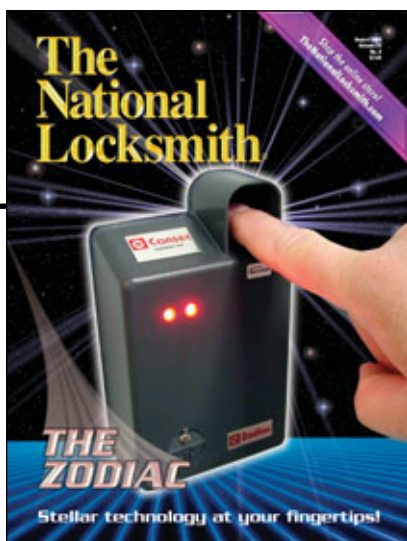
August 2002
Volume 73
No. 8
\$7.00



THE ZODIAC

Stellar technology at your fingertips!

On The Cover...



Biometric security devices — which were once only used in maximum security environments — will soon be mainstream, and the Cansec Zodiac is leading the way.

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The National Locksmith® ISSN #0364-3719 is published monthly by the National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. Periodicals postage paid at Bartlett, Illinois 60107 and additional mailing offices USPS 040110. Subscriptions \$46.00 per year in the USA; \$58.00 per year in Canada; \$72.00 in all other countries. Single copies \$7.00 each. Postmaster, please send change of address to National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. ©2002 by the National Publishing Company. All rights reserved. Printed in the U.S.A.



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COMMENTARY



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Police Call Locksmith

Can you imagine receiving a call from a Sheriff asking you to drop what you're doing and do an emergency car unlock twenty miles away? How about the car is in the heat of the summer sun, with a small child locked inside, temperatures quickly rising?

What would you do?

TNL reader C.D. Lipscomb, CML, CPS told the dispatcher who called him to have officers break a car window to get that child out of the car immediately. Guess what they told him?

The mother had refused to let a window on the car be broken! While I still can't believe that officer's first took no for an answer, this is what C.D. says happened:

O.K., so it was off to the races, flashers going and all. I took off across country at a high rate of fuel consumption, traveling on county and farm-to-market roads. Thank goodness for Skip Eckert's old GPS system I was using. I was still going to be nearly 30 minutes getting there. I passed a State Trooper on the side of the road at 90 mph, fully expecting to get stopped, but maybe pick up an escort. He either didn't see me, or wasn't going to stop writing the ticket he was working on. That didn't really make me happy either.

I had made it about half way there when dispatch called. They told me to cancel as the Volunteer fire department had gone on and broken the window. Seems the woman had waited 30 minutes before even calling

anyone and the kid was already deep in trouble. Paramedics were on their way to the kid then.

That drained all the adrenaline out of me and replaced it with tearful rage. How dare someone put a car window before their own child's welfare? How can they do that? How can they look in the mirror? How can they ever look that kid in the eye again? Surely, they can't do it and say "I love you", and mean it. Maybe they can't even comprehend the concept. I had told the dispatcher that they should arrest her. She said "Yeah, I think so, too."

Here in Chicago we recently had a case where a parent was criminally charged when she left two children in a hot car who died inside. For years I've trained and showed dogs in obedience. At dog shows, announcements are made that if a dog is spotted in a car, the windows will be broken to remove the dog. Questions are asked later, not first.

People are amazingly stupid sometimes, and as locksmiths, we occasionally get a first hand look at some of these cases. We try to do the right thing, and that's the best you can do. Kudos to C.D. for trying to help and let's hope that the next thing the parent wants unlocked is a jail cell.

Correction

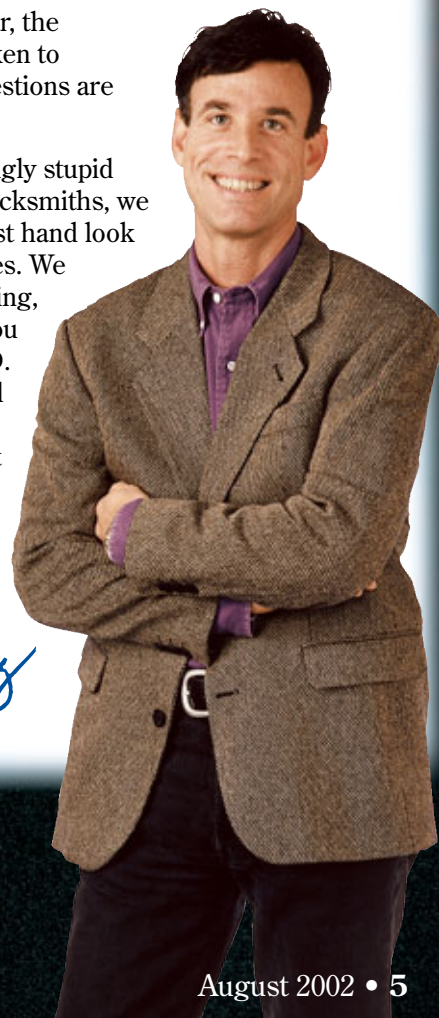
In the July issue of *The National Locksmith*, we published an article titled "Electronic Locks, Safes and Security" about a software program developed by Marc Weber Tobias. In that article, we wrongly stated that HPC, Inc. would carry the aforementioned software. HPC, Inc. has no affiliation with Marc Weber Tobias or his software.

Marc Goldberg

Have questions? Want free technical help?
Free Locksmith Forums!

www.TheNationalLocksmith.com

Marc Goldberg
Publisher



Mango's Message

The Challenge:

To spend 9-months on water sailing a race around the world (32,250 nautical miles) crossing four oceans and passing five continents through some of the most treacherous, hair raising, and desolate conditions this planet has to offer.

Are you up to the challenge?

If you're a John Wayne kind of guy or gal chiseled from granite, you probably are. But, if you're a sissy pasty face doe boy like myself, who shutters at the thought of canoeing down the wimpy Cripple Creek, (where the most challenging tactical maneuver is getting both oars to sweep in perfect unison and battling 3-inch white water rapids) let alone sailing the vast expanses of the great oceans, battling horizontal rain, icebergs, and 24-foot swells, you'll be perfectly content to watch this great race from the comforts of your La-Z-Boy rocker/recliner, which is just what I did.

The Race:

It's called the Volvo Ocean Race, and it is one of the most challenging, competitive and dangerous sports in the world. The race began September 23, 2001. It's a nine leg race, with the first leg starting from Southampton, UK and sailing to Cape Town, South Africa - 7,350 nautical miles.

Leg two went to Sydney, Australia - 6,550 nautical miles.

Leg three went to Auckland, New Zealand (via Hobart, Australia) - 2,050 nautical miles.

Leg four went to Rio de Janeiro, Brazil - 6,700 nautical miles. Leg five went to Miami, Florida - 4,450 nautical miles.

Leg six went to Baltimore/Annapolis, Maryland - 875 nautical miles. Leg seven went to La Rochelle, France - 3,400 nautical miles.

Leg eight went to Goteborg, Sweden - 1,075 nautical miles, and the final leg and finish of the race was on June 9, in Kiel, Germany - 250 nautical miles.

The Boats:

There were eight boats and crew members participating in this global

Pride, Unity & Association

race: The Norway *djuice* team; the Germany *illbrick* team; the Finland *Amer Sports One* team; the Finland *Amer Sports Too* (all female) team; the Channel Island *News Corporation* team; the Sweden *S/E/B* team; the Bermuda *Tyco* team, and the Sweden *ASSA ABLOY* team. That's right, ASSA ABLOY!

Each team consisted of 10-12 alternating members, all sailing similar single mast monohull keelboats.

In the end the Germany *illbrick* team placed first, the Sweden *ASSA ABLOY* team placed a very close second, and the Finland *Amer Sports One* team placed third. The Bermuda *Tyco* team placed fourth, the Channel Island *News Corporation* team placed fifth, the Norway *djuice* team placed sixth, the Sweden *S/E/B* team placed seventh, and the Finland *Amer Sports Too* team placed eighth.

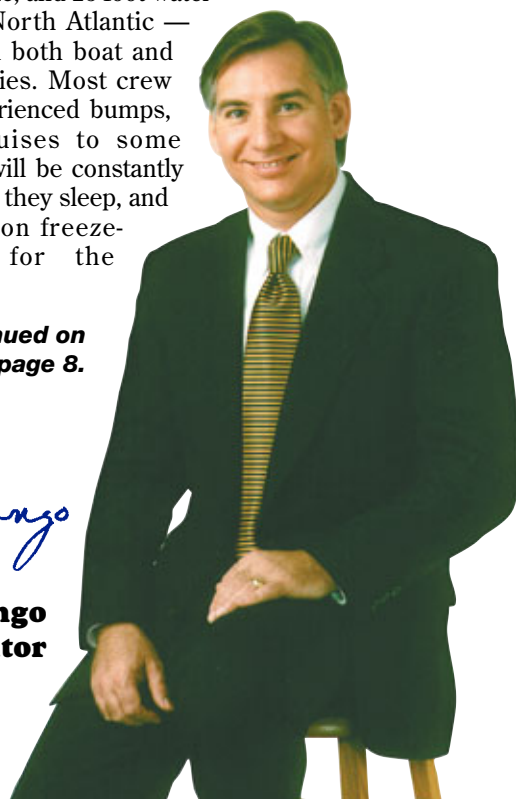
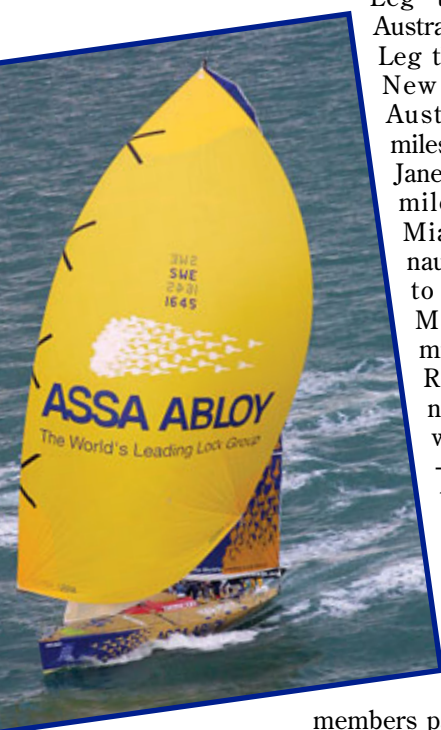
The Obstacles:

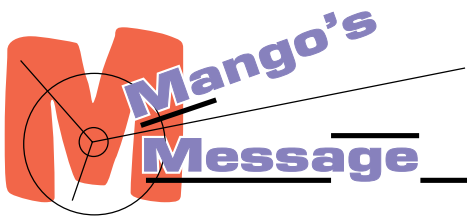
For each team there were tranquil, spectacular, and terrifying episodes and challenges before them. They had to contend with twisters off Sydney, Australia; icebergs in the South Pacific; and 25-foot water swells in the North Atlantic — not to mention both boat and human casualties. Most crew members experienced bumps, cuts, and bruises to some degree. They will be constantly wet, even when they sleep, and they will live on freeze-dried food for the duration.

Continued on
page 8.

Greg Mango

Greg Mango
Editor





Continued from page 6

Like I said, this wimp will enjoy the Volvo Ocean Race challenge from his La-Z-Boy with a bowl of hot buttery popcorn plopped on his bloated belly, thank you very much.

Commercial Success:

The participation of ASSA ABLOY in the Volvo Ocean Race has proven to be a very successful tool in uniting more than 25,000 employees, working in more than 100 different companies worldwide. It was much more than just a race. For the ASSA ABLOY Group, this event symbolized unity.

Anna Bernsten, vice president corporate communication of the ASSA ABLOY Group said that the company had achieved its main objective before the race was over. *"The main objective was to integrate the employees in the various companies worldwide. Although media exposure and brand awareness were not our primary objectives, the attention in the media fuels the integration process and it generates pride and motivation among our employees."*

Bernsten went on to say, *"Our participation in the Volvo Ocean Race has been an extremely successful tool in the process of integrating 100 companies in 40 countries. The race matches our Group's geographical presence and markets perfectly. It provides an ideal framework for our integration, both internally and externally. At each of the nine stopovers from Southampton to Kiel, we held meetings with our local companies, management and employees. In addition we got together with customers to discuss the local market and how we best can support them. We can note a remarkable upswing in Group awareness and pride."*

I must admit I felt a great sense of pride and association myself, when I first saw images of that huge inflated golden yellow sail with a stream of key blanks tattooed across it and the words ASSA ABLOY, The World's Leading Lock Group flash across the screen. Then for that gorgeous blue and yellow sailboat to place second in a race around the world, made the time spent following the event even more rewarding.

If you are an employee, do you have a sense of pride, unity and association for your company? If you are an employer, have you created an environment that fosters pride, unity and association for your employees?

Unity can be accomplished, and is achieved in several ways. Far too often unity occurs after a disaster, however, it doesn't have to be that way. Pride, unity and association doesn't require purchasing a multi-million dollar company team boat to sail the world, either. Sometimes it's the smallest things that can mean the most and have the greatest impact. I'll tell you what we do at the National.

We have what we call monthly pizza meetings. The meetings are scheduled for the second Friday of the month in which we all gather in the conference room and pig out on pizza and pop, very generously purchased by Marc. By then our latest edition of the magazine has been around a few weeks and it gives us *all* the opportunity to review the issue, talk about future projects and what's going on in the company, discuss what we want to accomplish, and most importantly, give *everybody* the opportunity to inject their opinions and ideas. We also discuss issues of concern if internal problems arise. It may have the look, feel, and taste of a pizza party, but the true intent and objective is to build pride, unity and association within the company. This is accomplished by inviting, and including, everyone (from the big chief Marc, to the lowest man on the totem pole... me) and allowing all votes to be counted and considered.

Depending on the size of your company, a monthly pizza meeting that includes *everyone* may not be practical. How about an annual picnic, golf outing, Bar-B-Q, or an employee thank-you party? With a little creative thinking, something can be done to make your team a cohesive unit.

It works! And it all starts at the top. **TLL**



August 2002

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Getting the Whole Story

One of the first articles I read is Mango's Message followed by Letters. This month's Message and Mr. John T. Dunn III's letter, are published at what I believe to be at a very opportune time. My interpretation of the proposed legislation as described in the June issue, tells me that the vehicle codes would be available very soon (days or maybe 2 weeks instead of 14 months) after the vehicle is on the market. Imagine having the vehicle codes when they are needed!

I must also commend Greg Mango and his ability to get in touch with Mr. Randy Simpson after *The New York Times* article in February of this year. Without his article we would have learned only one side of the story.

A competing trade magazine ran a similar article at the same time as *The National Locksmith*. However, the editor of that magazine did not mention anything about a response from Mr. Simpson. When I e-mailed him about what Mr. Simpson may or may not have said, I was informed that the editor had e-mailed Mr.

Simpson, but had not received a reply. Also due to publishing deadlines, further inquiries were not done. How terribly tragic.

There are thousands of locksmiths who have been denied the opportunity to hear "*The Rest of the Story*" as Mr. Paul Harvey says, and believe that ALOA has sold them out again!

Thank you very much for all of the hard work that each of you put into *The National Locksmith*. I am seeing the difference that is putting this publication at the top of our trade magazines.

Gaylord Hanson
Michigan

Great Publication

I just returned from a Board of Directors meeting with the Texas Locksmith Association (TLA). Believe it or not, most everybody brought in their June copy of *The National Locksmith* and discussions were based on the commentaries in it by Greg Mango "*Vehicle Owners' Right to Choose*" and Marc Goldberg "*Locksmiths in the News*."

I brought my copy to the meeting because of a letter that was printed from Dick Staples, titled "TCL-1 Pitch." I have been trying to convince the board that associations have to do more than just have a show, publish a book and have education seminars. Mr. Staples letter seems to confirm that thought.

Michael Hyde's article in the June issue was one of the best I have ever seen. Even I could operate the TCL-1 machine when I got through with his article.

Thanks for one of the best publications yet.

Laurie Simon
Texas



What Is It?

I came cross this little item shown in the photograph and thought someone might shed a little light on it for me. It seems to be in pretty good shape for its age.

It has guide bars, but I cannot figure out how to mount the key blank?



Can someone give me more info on this item? I can be reached at: (702) 623-3494.

Cliff
Nevada

The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Sentry® Group's New Gun Safes

Sentry® Group's R2911 and R3911 gun safes provide quality firearms storage. The R2911 Gun Safe offers a combination lock, carpeted interior and has a maximum 10-gun capacity. The R3911 Gun Safe features a maximum 14-gun capacity, a combination lock and carpeted interior.



The R2911 and R3911 provide three number combination locks, seven-gauge thick steel doors, bolt down hardware, and concealed hinges.

In addition, the safes comply with firearms safe storage device requirements set forth in pending legislation in California, Penal Code Section 12087 through 12088.9. As of January 1, 2002, all Californians must comply with the new legislation when purchasing a new firearm.

ToolPak's New ToolTote

This cutting edge tool pack has an over sized



opening for easy access that can be quickly zipped closed to keep tools where they belong.

The ToolTote features:

- New rigid bottom that is not hard on surfaces.

- 14 external pockets of varying sizes accommodates all types of tools.

- Ruggedly made for industrial applications, the ToolTote is made using tough nylons and webbing, for years of trouble-free service.

- Carry ToolTote hands free up ladders with the optional shoulder strap.

- Comfortable padded handles.

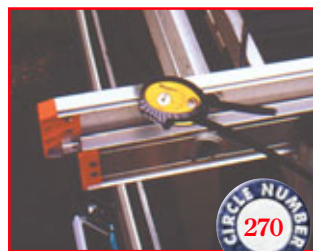
- Rigid bottom sandwiched between two layers of tough nylon.

- "D" rings hold optional shoulder strap, or anything else you want to clip on to your ToolTote.

The ToolTote and the complete line of ToolPak products are available from your local ToolPak dealer.

Master Lock's® Python™

The Python lock's unique adjustability makes it a perfect security solution for a wide range of applications, such as: Ladders, power



tools, bikes, motorcycles, boats, truck and car carrier cargo and more.

Python has a vinyl coated, braided steel cable and a patented locking mechanism, giving users the tightest, strongest fit when locking down almost anything. The six-foot cable may be pulled tight and locked in infinite positions

An EZ Change to Existing Locks

EZ Change Lock Company, LLC, has introduced a new locking technology that not only speeds

up the lock-changing process significantly, it also makes the process easier, more secure and more cost-efficient for the user.

The product EZ Change Lock, is based on a breakthrough concept known as radial tumblers. With this new, patent-pending technology, most existing commercial locks can be upgraded with a uniquely engineered cylinder, that allows users to quickly reset a lock's tumblers to match a different key (no need to replace tumblers or springs), rendering the old key invalid. This does not affect the master key, and you can change the master key without affecting the tenant's key.

The new lock is highly pick and tamper resistant and the tumblers can be reset hundreds of times without repeating the combination.



along its length.

With its non-scratch, weather resistant lock body, the Python can stand up to the toughest outdoor conditions. Keyed-alike applications, which allow the same key to be used for multiple locks, are made more convenient by the patented rekeyable wafer cylinder.

Marks USA Ornamental Security Storm Door Locks



A new four-color brochure assists specifiers and buyers in selecting mortise locksets for ornamental security storm doors. Standard and thin line versions are available featuring screw less knobs and levers, proprietary no droop lever springs, cylinder collar security inserts and high strength solid steel



hubs. Handsome design and solid construction have made these ornamental locksets the most popular in the country.

Security System Contractor Timesaving Cart

The cart, called a Tool Kaddie, is a sturdy polyethylene toolbox on a dolly, that contains all five kits or the kits can be ordered separately. The Tool Kaddie is lockable, resists pilferage, projects a

SECURITY CAFÉ

Continued from page 12



professional image and keeps all tools and parts organized.

The complete Security Cart contains five kits: *Tool Kit*, with the 10 most-needed hand tools, from crimpers to a digital multi-meter, for security installations. *CCTV Kit*, with generous supplies of the 12 most common connectors used in CCTV installations.

Mounting Hardware Kit, with supplies of the 15 most common parts - including bolt anchors - for wall mounting. *Machine Screw Kit*, with quantities of the 15 most common machine screws, washers and nuts needed in security installations. *Fuse and Wire Termination Kit*, with supplies of the 36 most common fuses, relays, splices and terminations.

Olympus Lock's New 777 and 888

Olympus Lock, Inc. has added two new products to its line of innovative pin tumbler cabinet locks-the new Olympus 777 and 888 series cabinet door and drawer locks to accept Schlage® compatible large format interchangeable cores. The 777IC and 888IC Series may be used with Schlage Quad, Numbered



Section, Everest and Schlage Classic large format IC cores, KeyMark IC cores, and Mul-T-Lock IC cores. The 777P and 888P Series accept Schlage Primus large format IC cores.

The Olympus 777 and 888 IC core cabinet locks will retrofit any of our standard 1-1/8" diameter cabinet locks and use the same footprint as Olympus Lock's 700SC, 800SC, 721, 850 or 950 cabinet locks. The new Olympus 777 and 888 cabinet locks are available for immediate shipment.

What's New At Jensen

The new Rolling Tool Organizer Pro from Bucket

Boss is great for plant maintenance personnel, installers and other professionals requiring light-duty tool transport. It's a



foldable rolling crate with 3" rubber wheels and a collapsible tote handle that extends to 39". Convenient side handles make it easy to lift over obstacles. The Organizer Pro features a large (17" W x 15" D x 16" H) interior compartment and a rugged 1800-denier removable liner with 58 outside pockets to organize tools. There's also a custom pocket for cordless drill, bits and tape measure - plus a wide inside pocket.

PRO-LOK Key King 3

The Key King is a compact key ring that is comfortable to use and contains three Multi Purpose Tools: Knife, Phillips Screwdriver and a Standard Screwdriver, and comes with a protective pouch and



interlocking key ring. The Key King 3 is lightweight (weighs only 8/10 of an ounce) and will not weigh down your key ring. Its solid construction is made of hardened stainless steel for durability and has an exclusive locking design.

Attractively clamshell packaged for retail display to increase impulse sales and is boxed in a counter top display containing six tools.

KEY-BAK's® Retractable Badge-Holders

A new cool, colorful and see-through version of the popular Retract-a-Badge is now offered by KEY-BAK®, a division of West Coast Chain Manufacturing Company.

Clipped to the wearer's clothing, the unit holds the badge in plain view. Inside the device is a precision, spring-loaded reel with a

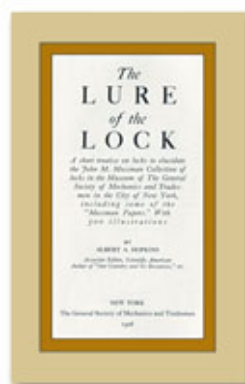


36" nylon cord, able to withstand over 60,000 retractions! The wearer can effortlessly pull the badge out to arm's length and pass it through a card reader without detaching it from the clothing.

The "Millennium Translucent" is available with dome or vinyl logo and in any background color. It comes in both the circular and square design and can accommodate a split ring for keys.

TNL

The Lure of the Lock



CLICK HERE TO LEARN MORE



#LURE

Cansec's Zodiac Fingerprint Reader

In the access control world, there are three ways to confirm a person's identity. They are:

1. By something they have (a key or an access card).
2. By something they know (a memorised PIN).
3. By something they are (a measurable physical characteristic such as a fingerprint, etc.)

The process of confirming a person's identity by something they are, is what biometrics is all about. There are currently a number of technologies vying for market share. The primary ones are:

- Fingerprint readers
- Face recognition
- Iris scan

For the mainstream access control market, which demands small size, low cost and ease of installation, fingerprint technology has a decided edge. But where is the market for biometrics in access control? In one word - retrofit!

Retrofit - The Biggest Market Opportunity

The rationale for this is simple. Almost all users looking to utilise biometrics already have a conventional access control system (most likely card based). It is highly unlikely that a user will be going from nothing to biometrics. A further assumption can be made that users will not need to upgrade all existing card readers to biometrics. They will typically want to upgrade only a few select areas where a higher level of security is required, (i.e. computer rooms, research labs, etc).

That being the case, the ideal biometric product for this market must have the following attributes:

1. The reader must be directly plug compatible with conventional card readers (Wiegand and mag stripe) so that no wiring changes are required at the door.
2. The reader must emulate the prox or mag reader being replaced so that no firmware changes are required at the existing control panel (the panel should not even know that the reader was upgraded).
3. The readers must not require connection to each other or to a host computer (no new wiring).

4. The readers must be small, low cost and easy to install.

The Zodiac fingerprint reader by Cansec Systems Ltd. was designed from the ground up for the retrofit market and meets all the above criteria. (*See photograph 1.*)

Zodiac's Three Elements

The Zodiac solution consists of three elements:

1. The Zodiac reader
2. The BioPatch or SmartCard
3. User Enrolment Kit

At 3-1/2 inches wide, 5-1/2 inches tall and 1-1/2 inches deep, the Zodiac reader is small enough to be surface mounted almost anywhere. An optical fingerprint sensor is used as opposed to a solid state sensor due to its superior resistance to abuse and vandalism. The housing is fabricated from a polycarbonate alloy, which provides extremely high impact resistance. Authentication requires



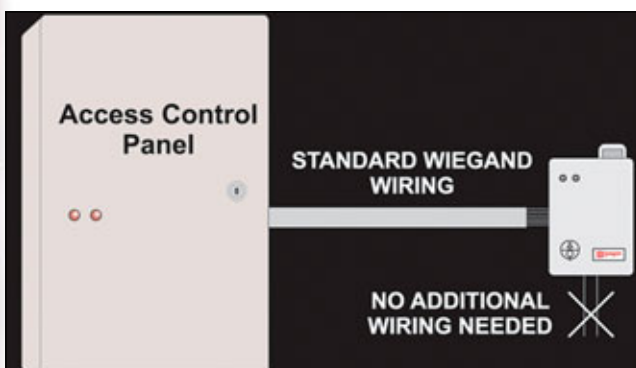
1. The Zodiac fingerprint reader by Cansec Systems Ltd.

only two seconds and the reader is very tolerant of finger placement (a very important factor).

A conventional prox reader can be replaced with a Zodiac reader in as little as 5-minutes. The reader uses the same 6 wire Wiegand hook-up found on standard prox readers. (See *photograph 2.*) There is no need to connect the Zodiac readers together or to a host computer for template management, as is common with other biometric readers.

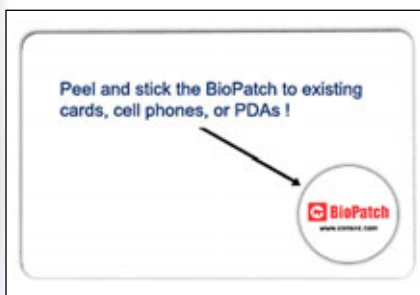
BioPatch

The BioPatch (an industry first) is a thin one inch diameter stick-on patch which uses the latest contactless smart card technology to store the user's fingerprint template(s) as well as their Site Code and ID (the information stored in traditional prox cards). (See *photograph 3.*)



2. The reader uses a common 6 wire Wiegand hook-up.

3. The BioPatch.



4. Affix the BioPatch to the user's existing access card.

By affixing the BioPatch to the user's existing access card, the need to carry two cards is avoided. (See *photograph 4.*) Only those people who require access to the Zodiac readers require a BioPatch. Since only a small percentage of cardholders will typically require access to the Zodiac readers, the overall cost is kept to a minimum.

To gain access at a Zodiac reader, the user simply presents the BioPatch to the reader. The reader extracts the fingerprint template as well as the Site Code and ID, and stores it in memory. The optical scanner is then turned on and the user places their finger on it. The scanner captures the image and compares it to the image stored in the BioPatch. If they match, the reader transmits the Site Code and ID to the attached control unit in emulated Wiegand format, just as if the data came from a standard prox reader. The Site Code and ID in the BioPatch are encoded to match the access card to which it is affixed. Thus, the same data is transmitted to the access control system for a given card whether it is used at a standard prox reader or a Zodiac reader. (See *photograph 5.*)

The beauty of this solution is that it allows users to add biometrics to their existing access control system without changing anything, except the readers they want to upgrade. No changes are required to the host computer, controllers, or wiring. BioPatches need to be attached only to those individuals who will require access to the Zodiac protected areas (typically a small portion of the total card population).

Enrolment Kit

The Enrolment Kit consists of the following components:

1. A USB fingerprint scanner
2. A BioPatch SmartCard reader\writer
3. Enrolment software

The Enrolment Kit provides a means for users to capture fingerprint images and store them in BioPatches or SmartCards. It also allows the user to assign an ID number during enrolment. This is critical, as the Site Code and ID on both the prox card and BioPatch must be the same, otherwise the user would show up on the access control system under two different ID numbers. The entire enrolment process takes as little as 30 seconds to complete.

The Portable Template Concept

There are some very significant advantages to using the portable template concept. Some of the major ones are:

1. There is no need to enrol at each reader since you carry your fingerprint template with you.



5. The same data is transmitted whether it is used at a standard prox reader or a Zodiac reader.



6. Cansec prox reader.

2. There is no need to interconnect the reader to do template management (from a master enrolment reader or host).

3. Readers have unlimited capacity (unlike readers which store the templates in the reader).

4. Personal privacy is protected, as the fingerprint data does not reside anywhere but in the user's BioPatch or SmartCard.

What About New Installations?

While the Zodiac system was targeted at the retrofit market, there will be cases where a brand new system is being installed. Since these users do not already have an access control system, they are not carrying an access card. In this case, the Zodiac SmartCard would be used instead of the BioPatch. The Zodiac SmartCard is based on the same contactless smart card technology and works exactly the same as the BioPatch. The SmartCard is standard credit card size and thickness and is compatible with dye sublimation card printers (typically used to produce photo ID badges).

As with the retrofit market, users putting in new systems are unlikely to want all doors to be equipped with biometrics. They are certain to have a larger number of doors where a non-biometric reader is more than adequate. This reader, however, will need to operate with the same SmartCard used on the Zodiac reader, otherwise the user would be required to carry two cards.

To address this, Cansec developed a small, low cost prox reader, which works with the Zodiac SmartCard. (See

photograph 6.) When a Zodiac SmartCard is presented at the reader, it simply reads the Site Code and ID number and transmits it to the attached controller in emulated Wiegand format.

The Zodiac reader and companion prox reader can be used with any access control panel that supports 26 bit Wiegand (and almost all do). This means you can use them with whatever access control system you are currently selling (which you no doubt love, understand, and for which you have an inventory of spare parts). If you do not already have an access control line or are looking to replace your current one, check out Cansec's SmartLock Online system (www.cansec.com).

What About Cut Fingers?

Each fingerprint template contains far more data than is required to do a match. For that reason, even a significant cut would not prevent an enrolled finger from being accepted. However, if a Band-Aid were placed on the finger, you would have to get re-enrolled using another finger. To address this problem, the enrolment software allows you to enrol using a primary finger and an alternate finger. In this way, the alternate finger could be used until the primary finger could be "put back to work."

No Fingers!

In some instances, a user may not have any usable prints (or any fingers for that matter). Special provision has been made in the enrolment software to assign a card "bypass privilege." Cards assigned this privilege bypass the authentication process. The Zodiac reader simply reads the encoded Site Code and ID data and transmits it to the attached controller.

Not A "Biometrics" Company


Cansec designed the Zodiac reader specifically for access control. This is a market which Cansec understands intimately, having manufactured access control products since 1987. Cansec is privately owned, has no long-term debt and has been profitable every year since it was founded. Cansec makes money the old fashioned way - by developing and distributing innovative access control products that work.

Cansec is not a venture capital funded "biometrics" company which has never turned a profit (which is the case with virtually all of them) and might not be around for the long term.

Conclusion

Forget chasing the airports, border crossings and other such massive projects. They can take years to close, have impossibly slim margins and are not going to the small guys anyway. Chase the retrofit market. It is there right now, has great margins and is not of any interest to the big guys (who are all chasing the airport & border crossing jobs).

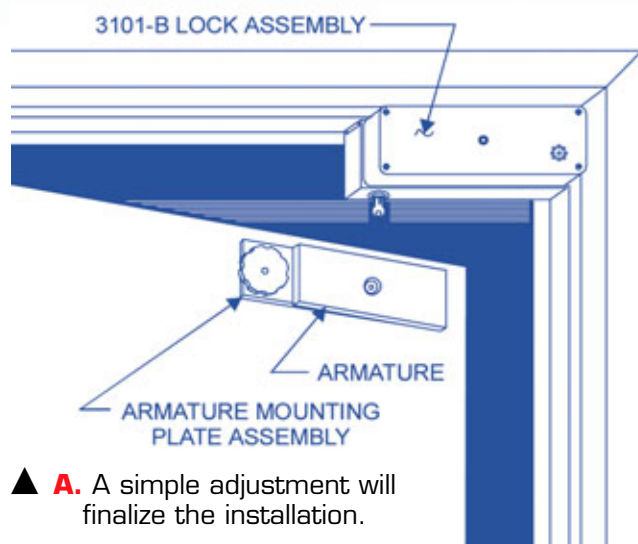
For more information on Cansec products contact:

Cansec Systems Ltd.
3105 Unity Drive, Unit 9
Mississauga, ON
Canada L5L 4L2
Phone: (905) 820-2404
Fax: (905) 820-0301
E-Mail: sales@cansec.com
Web: www.cansec.com
Circle 265 on Rapid Reply. 

DynaLock's Delayed Egress Lock System

DynaLock has re-designed the self-contained Delay Egress Lock System. The Model 3101B features a new door movement sensing system, incorporating an adjustment wheel that compensates for typical door and frame imperfections.

A ball-type actuator, controlled by the adjustment wheel, tolerates door sag or misalignment and operates a concealed optical sensor for high reliability and consistent performance. (See photograph 1.) Additional features include an advanced microprocessor managing all lock functions, eliminating the need for an external controller. If an error is experienced during wiring, self-resetting circuitry powers down the electronics before damage occurs.



The 3101B requires both mechanical and electrical installation procedures as described herein. When completed, a simple adjustment procedure to set the door movement will finalize the installation. (See illustration A.)

• Handling •

The electromagnetic lock and armature are ruggedly constructed and designed to provide years of trouble-free service. Care must be taken during installation and use that the lock face and armature face are kept free of dirt, rust, paint, or any other obstruction which may interfere with the lock and armature making good contact.

• Mechanical Installation •

Familiarize yourself with the door and frame conditions. The lock must mount rigidly to the underside of the door frame header and against the vertical strike jamb. The door mounted armature is supplied with hardware that allows it to pivot slightly and pull away from the door as part of the delayed egress function.

Note: This lock does not change hands to match the hand of the door. Do not remove the coil assembly from the lock housing.

Note: If this lock is supplied with the DSM feature, be certain to mount the armature with the DSM block extension opposite the sensor adjustment wheel.



▲ 1. The DynaLock 3101B Lock Assembly.

• Operation •

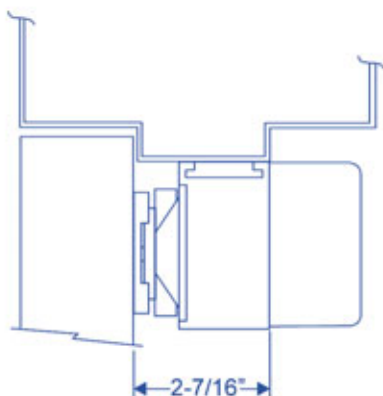
With the door normally closed and latched by the existing mechanical door hardware and also magnetically secured by the 3101B lock, any attempt to exit, by applying 15 lbs. or less pressure to the door, will cause the door to become unlatched, and activate the 3101B delay egress sequencer. An audible signal and red LED will then pulsate for 15 seconds. After the time delay has lapsed the lock will release. The audible signal, however, will sound continually, and the LED will change to green until the door is shut and the lock is reset by a built-in or remote keyswitch. In an emergency the system unlocks automatically when signaled from the building emergency system.

• Design •

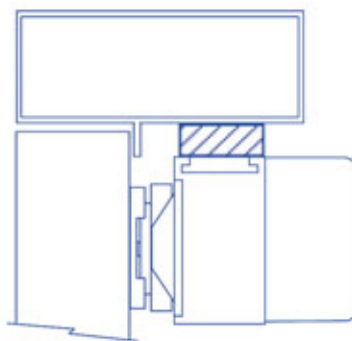
The 3101B Delay Egress System is a 1500 pound holding force electromagnetic lock electronically controlled to provide a 15 or 30 second delay in unlocking.

MOUNTING CONSIDERATIONS

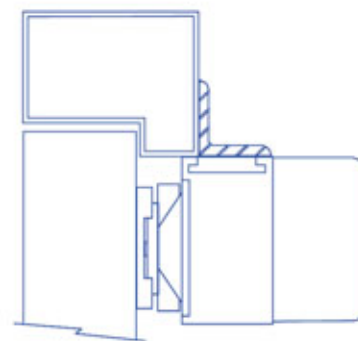
Inspect the door frame and determine if an angle bracket or filler plate will be required for installation. The lock will require a 2-7/16" wide header stop for a suitable mounting surface.



NORMAL MOUNTING



***FILLER PLATE REQUIRED**



***ANGLE BRACKET REQUIRED**

*These items are available from DynaLock.

▲ **B.** The lock will require a 2-7/16" wide header stop.

• Electrical Installation •

After mechanical installation is complete the 3101B needs to be wired and adjusted. A power source, 12 or 24 VDC or VAC is required. Once low voltage power is supplied the unit is fully operational. Delay egress systems also normally require fire panel tie-in. All other wiring is for selected options.

• Required Tools •

- (1) Electric Drill
- (1) #2 Phillips Screw Driver
- (1) Soft Faced Mallet
- (1) Hammer
- (1) Center Punch
- (1) 3/16" Hex Wrench
- (1) Pencil & Tape

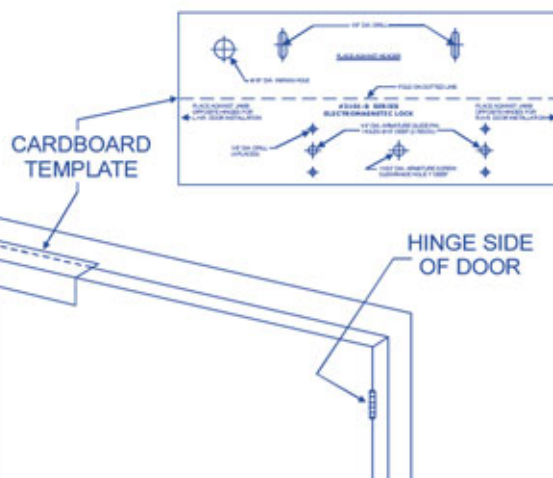
Drill Bits: 1/8", 3/16", 1/4", 5/16", 3/8", 9/16"

• Mounting Considerations •

Inspect the door frame and determine if an angle bracket or filler plate will be required for installation. The lock will require a 2-7/16" wide header stop for a suitable mounting surface. (See illustration B.)

• Using the Template •

1. Fold the template on the dotted line to form a 90-degree angle. Scoring the template with a straight edge and a screwdriver will make it fold easier.
2. With the door in the closed and latched position place the template against the header and door with one edge against the vertical strike jamb and tape in place. (See illustration C.)
3. Transfer all hole locations to both the door and header with a center punch, then remove the template from the door.
4. Referring to the template, drill two 1/8" diameter lock mounting holes and one 9/16" diameter wiring hole in the top of the frame, at the transferred locations.



► **C.** Place the template against the header and door.

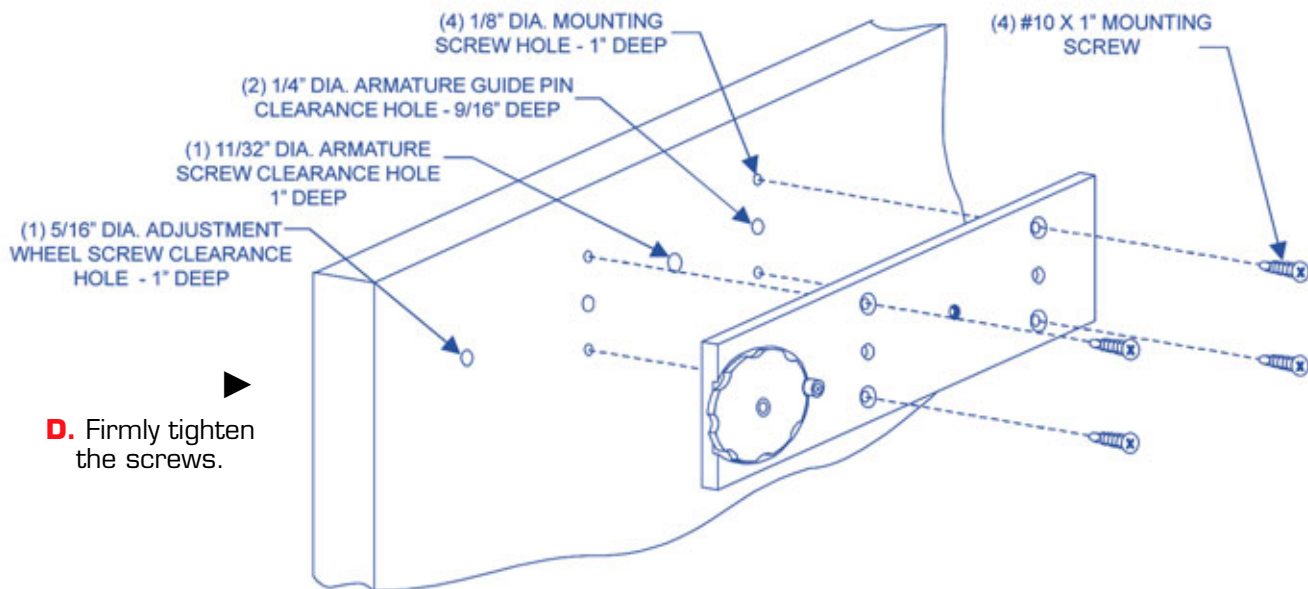
5. Drill the remaining transferred holes in the face of the door to accept the Armature Mounting Plate Assembly:

- a. Four 1/8" diameter mounting screw holes, 1" deep.
- b. Two 1/4" diameter armature guide pin clearance holes, 9/16" deep.
- c. One 11/32" diameter armature screw clearance hole, 1" deep minimum.
- d. One 5/16" diameter adjustment wheel screw clearance hole, 1" deep.

• Mounting the Armature Assembly •

Using the four #10 x 1" flat head sheet metal screws, attach the armature mounting plate to the door. Firmly tighten the screws with a #2 phillips screw driver. (See illustration D.)

Locate the two 3/16" diameter Anti-Spin Pins from the hardware kit. Place the Armature face down on a soft surface (i.e. the shipping carton) and drive the pins into the holes provided. Attach the Armature to the Mounting Plate



D. Firmly tighten the screws.

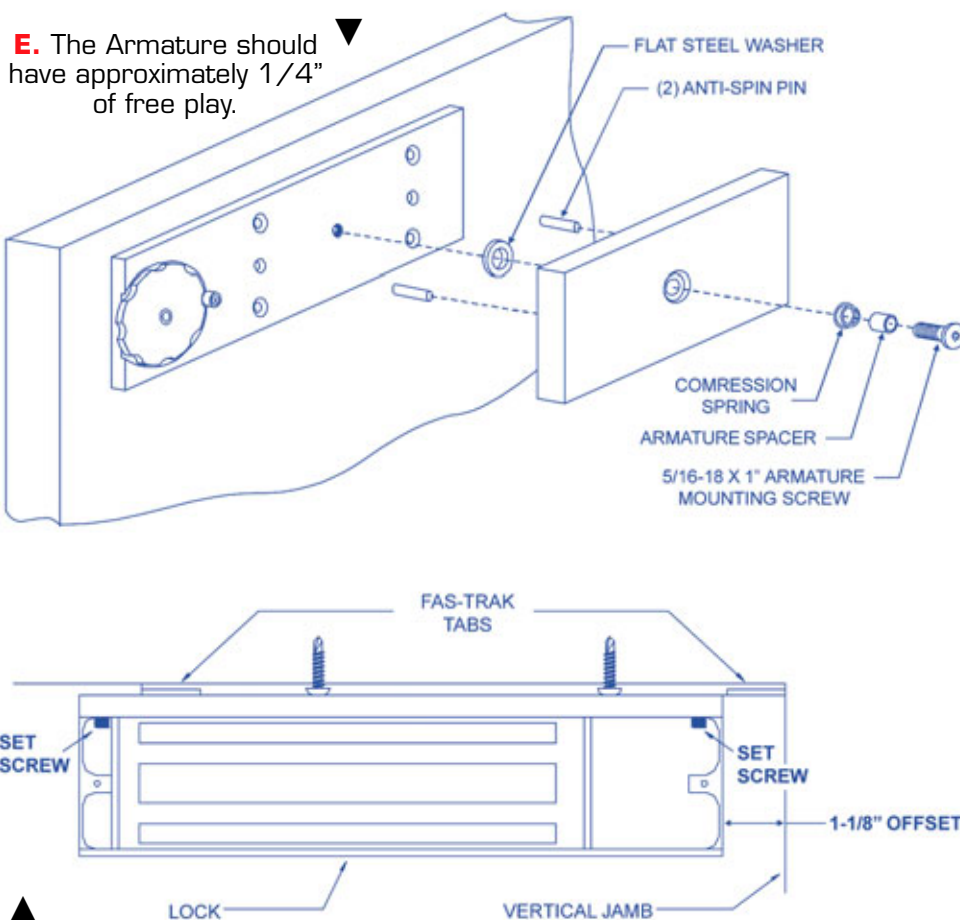
Assembly using the hardware supplied. Apply the supplied thread-locking compound to the threads of the Armature Mounting Screw and firmly tighten with a 3/16" hex wrench. The head of the armature mounting screw must not project beyond the face of the armature. Failure to properly secure the Armature to the door could result in serious injury or possible security breach.

Check the installation by grasping the Armature and pulling it away from the Mounting Plate. Although the mounting screw is tight the Armature should have approximately 1/4" of free play, under slight spring tension. (See illustration E.)

• Mounting the Lock •

Before installation begins remove the rear Electronics Cover, End Cover and Sensor Cover Assembly. Carefully unplug the sensor harness from the circuit board connector labeled J5, then detach the Sensor Cover Assembly from the lock. In the upper inside corners of the lock housing are located two #1/4-28 set screws. (See illustration F.) Using the 1/8" ball head hex wrench, loosen (do not remove) the two set screws until the Fas-Trak Baseplate is free. Remove the Fas-Trak.

Place the Fas-Trak against the header with the slot counterbores visible and the tabs facing the door. (See illustration G.) Attach the Fas-Trak to the header at both slotted hole locations, with two #10 x 1" Tek



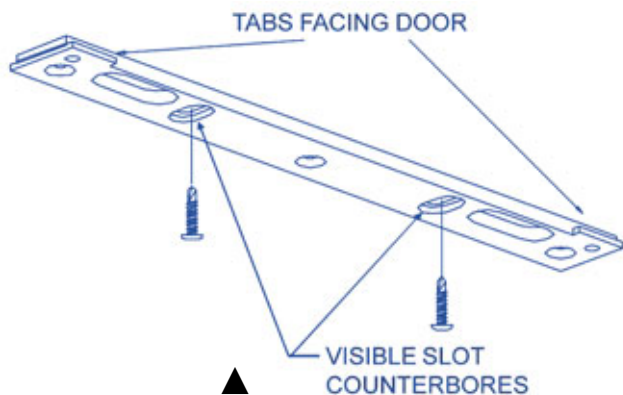
F. In the upper inside corners of the lock housing are two #1/4-28 set screws.

screws. Tighten the screws just snug enough to allow for final adjustment.

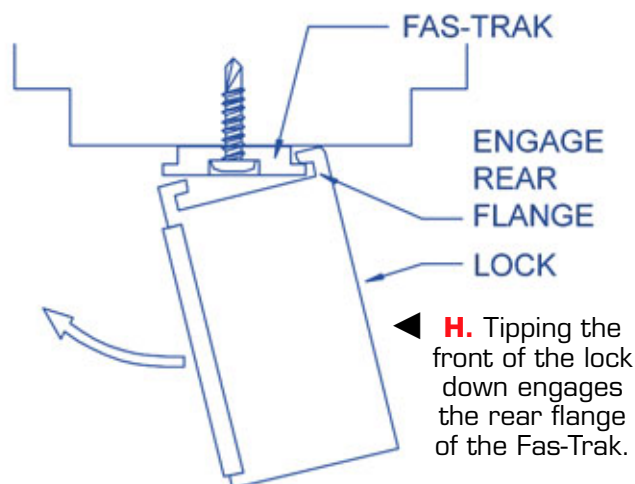
3. Temporarily mount the lock to the Fas-Trak by offsetting the lock 1-1/8" from the jamb and tipping the front of the lock down, engaging the rear flange of the Fas-Trak. (See illustration H.) Rotate the lock up, allowing one tab to pass through the corresponding notch in the top of the lock housing. Slide the lock into position. Close and latch the door. Check that the armature and lock faces

Continued on page 26

Continued from page 24

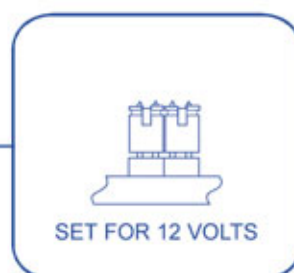
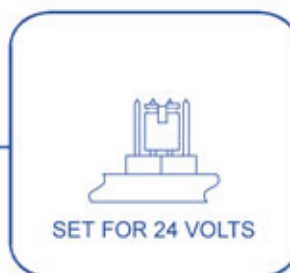


G. Place the Fas-Trak against the header with the slot counterbores visible.



I. Remove the electronics cover to expose the circuit board assembly.

make full contact. If any adjustment is required, gently tap the housing with a soft mallet until full contact is achieved. Open the door, remove the lock from the Fas-Trak and tighten both slot screws. Drive three #10 x 1" Tek screws into the header using the Fas-Trak as a physical template. Screw heads must not project above the Fas-Trak.



J. Check that the voltage selection jumper (J3) is properly set to match your input power.

4. Any roughed-in wiring may be brought in at this time through the slotted wiring holes. Re-install the lock on the Fas-Trak. Firmly tighten both housing set screws with the 1/8" ball head hex wrench. Re-install the End Cover and Sensor Cover Assembly. Carefully plug the Sensor harness back into the J5 connector on the circuit board.

• Basic Set-Up •

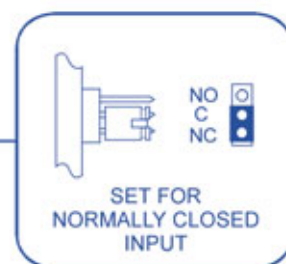
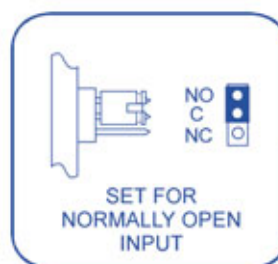
1. Remove the electronics cover to expose the circuit board assembly. (See illustration I.)

2. (V) - Voltage Selection

Check that the voltage selection jumper (J3) is properly set to match your input power. Note that all locks are factory set for 24 volts. (See illustration J.)

3. (FA) - Fire Alarm Control

Check that the fire alarm control jumper (J9) is properly set to match your fire panel input contacts. If fire panel tie-in is not required, leave jumper at factory setting (N.O.). Remove the Electronics Cover to expose the circuit board assembly. (See illustration K.)



K. Remove the Electronics Cover to expose the circuit board assembly.

4. (C) - System Selector Switches

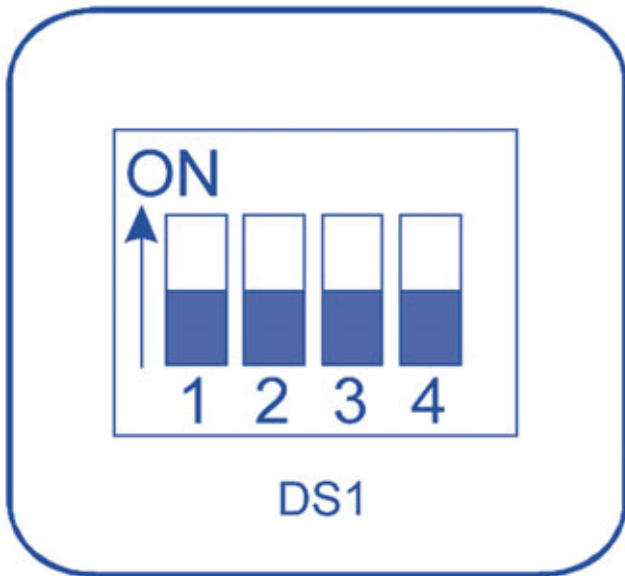
The selector switches (DS1) that control major system functions are factory set to the OFF position for basic lock operation. (See illustration L.) Switch 1 will be used during sensor adjustment. Switches 2, 3 and 4 are only used for options.

• Basic Wiring •

Terminals 1 and 2 - Power Input. May be 12 or 24 Volts, AC or DC. (See illustration M.) Current requirement is 0.75 Amps for 12 Volts and 0.5 Amps for 24 Volts.

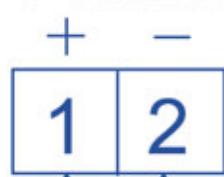
Terminals 3 and 4 - Fire Panel Input. May be normally-open (N.O.) or normally-closed (N.C.) dry contacts from fire panel. (See illustration N.)

Continued on page 30



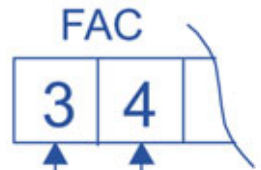
▲ **L.** The selector switches (DS1) that control major system functions.

POWER



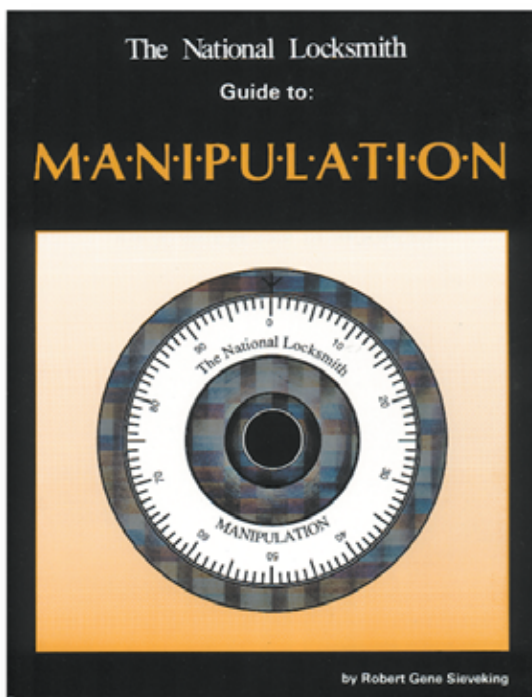
POWER INPUT
12/24 VAC/VDC

◀ **M.** Terminals 1 and 2 are for power input.



FIRE PANEL INPUT
N.O. OR N.C.
CONTACTS

▶ **N.**
Terminals 3 and 4 are for fire panel input.



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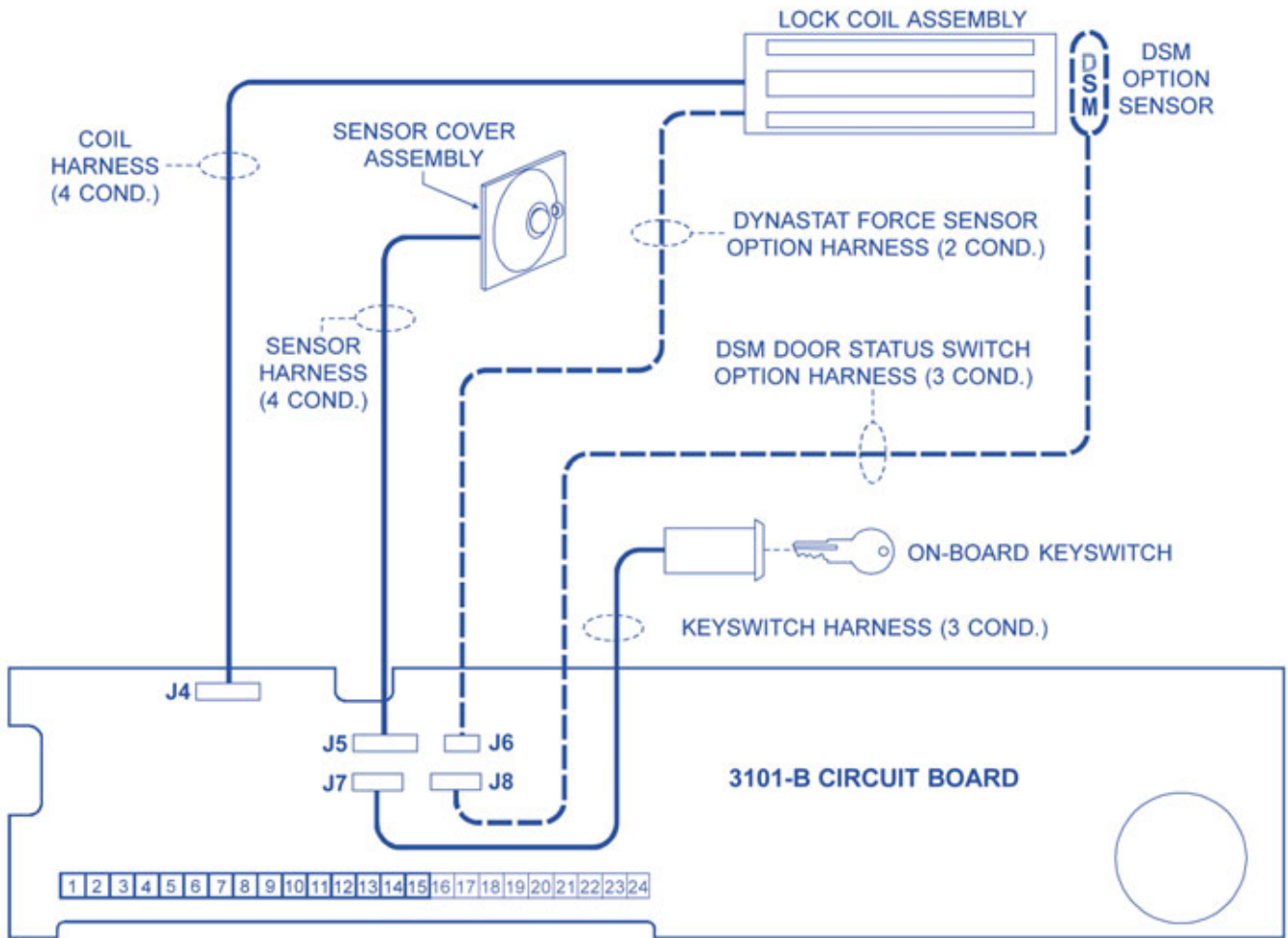
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#MAN - 1

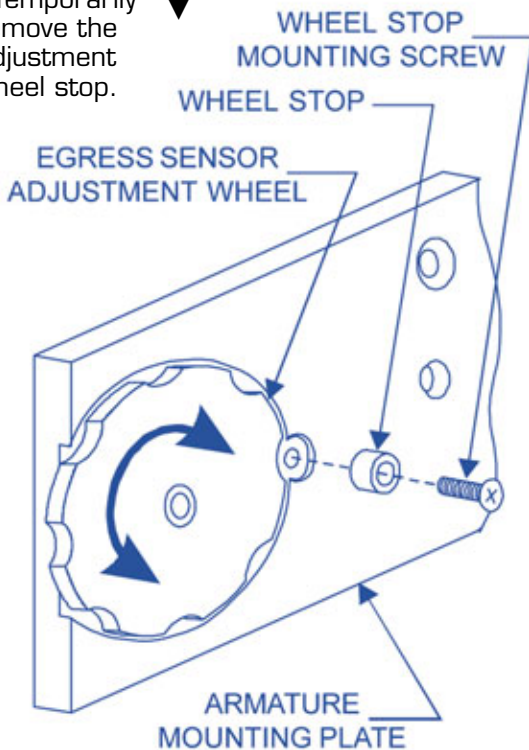
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FACTORY WIRING

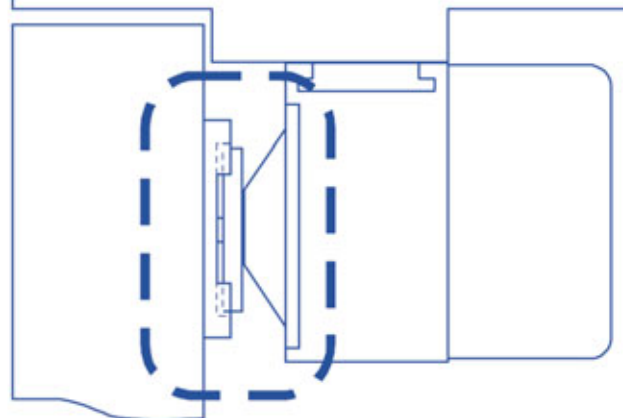


▲ **Q.** A factory wiring example.

P. Temporarily remove the adjustment wheel stop.



DOOR CLOSED AND LATCHED



▲ **Q.** Rotate the adjustment wheel counter-clockwise to fully depress the ball plunger on the lock.

When the fire panel trips, the 3101-B will release, the audible will sound a constant tone and the bi-color LED (LED1) will change to green. When the fire panel is reset, the lock will reset and lock.

Note: do not apply power to terminals 3 and 4 or damage will occur.

Illustration O, is a factory wiring example.

• **Egress Sensor Adjustment** •

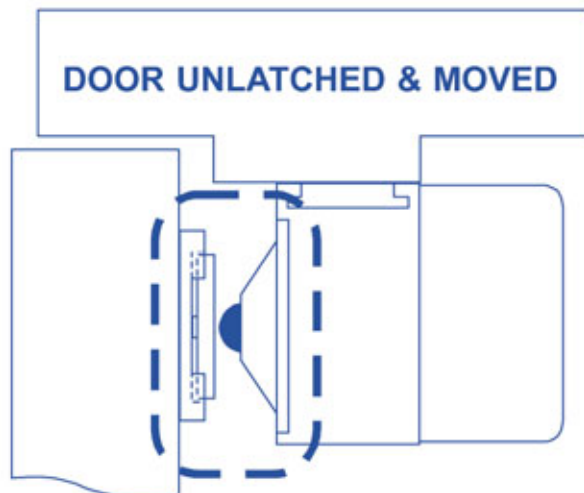
With the door closed and latched, apply input power to terminals 1 & 2. Slide selector switch (DS1) #1 to the ON position to activate the Set-Up mode. Rotate the on-board

keyswitch counter-clockwise. The 3101-B should now be unlocked (LED1 - OFF).

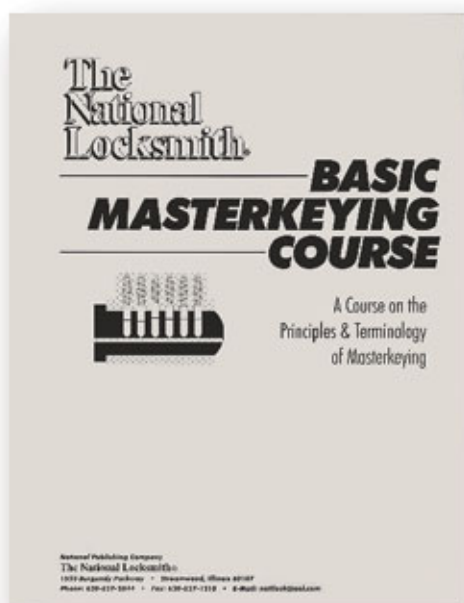
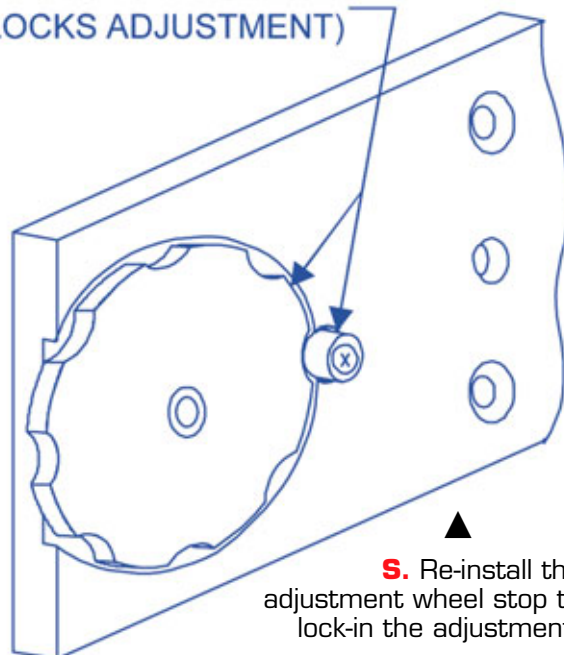
Open the door. Temporarily remove the adjustment wheel stop from the armature mounting plate and close the door. Set aside for re-installation later. (*See illustration P*)

3. With the door closed observe the bi-color LED

**WHEEL STOP INSTALLED
(LOCKS ADJUSTMENT)**



▲ **R.** The LED will shut off as soon as the door opens far enough for the ball plunger to activate.



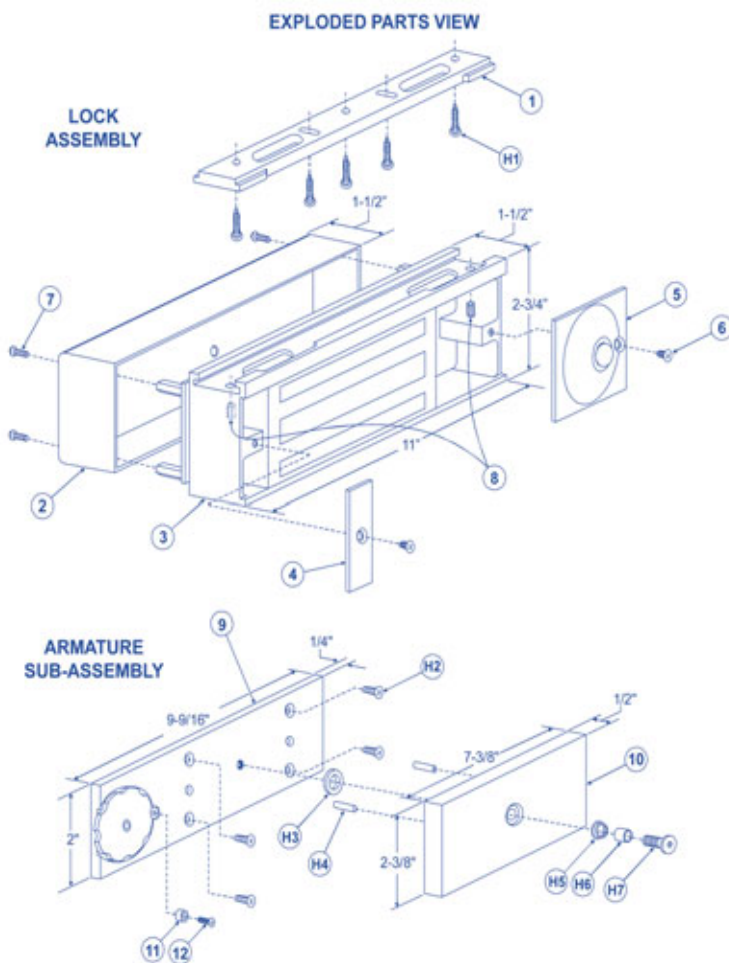
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450 page course

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▲ **T.** An exploded view of the 3101B.


(LED1) on the circuit board. It should be lit red. If it is not lit, rotate the adjustment wheel counter-clockwise as necessary to ensure that it will contact and fully depress the ball plunger on the lock. (See *illustration Q.*) Rattle the door to ensure the LED remains red.

4. With the door closed and LED1 lit red, unlatch and slowly open the door. The LED will shut off as soon as the door opens far enough for the ball plunger to activate. (See *illustration R.*)

5. With adjustment completed, re-install the adjustment wheel stop to lock-in the adjustment. (See *illustration S.*) Close the door, slide selector switch (DS1) #1 back to the OFF position and return the on-board keyswitch to the center position to re-lock the 3101B.

6. Unlatch and push on the door until delay egress triggers (1-3 seconds). The audible will sound and LED1 will flash red. After 15 seconds the lock will release. Turn the on-board keyswitch clockwise to reset the lock. If delayed egress triggers too soon, or fails to trigger, re-adjust the sensor adjustment wheel for desired sensitivity.

An exploded view of the 3101B can be seen in *illustration T.*

For more information contact: DynaLock Corp., 705 Emmett Street, Forestville, CT 06010. Phone: (877) 396-2562 or (860) 582-4761; Fax: (860) 585-0338; E-mail: dynalock.corp@snet.net; Website: www.dynalock.com. Circle 264 on Rapid Reply. 



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Quick Entry

UPDATE

by
Steve
Young



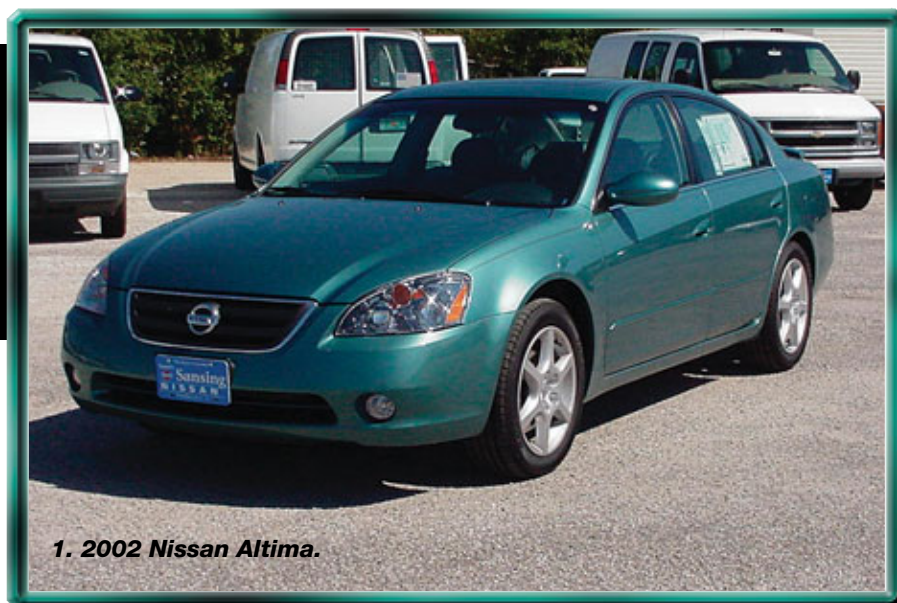
TECH TRAIN PRODUCTIONS

2002 NISSAN ALTIMA

Back in 1997, Nissan was having financial problems that many blamed on poor management decisions. Only two years previously, they had decided to discontinue the flagship Nissan 300ZX amid howls of protest from car enthusiasts, leaving Nissan without a true sports car. The 1997 Nissan Altima was introduced in Detroit with a huge multi media and live action event that in part reproduced a very successful animated Nissan commercial.

You'll probably remember the commercial that featured look-alike versions of G.I. Joe, Barbie and Ken coming to life like something out of "Toy Story." The hero of the commercial swept the heroine off her feet while driving a bright red toy version of a Nissan 300ZX. At the time those commercials aired, I was completely amazed because the 300ZX was no longer in production. As it turned out, Nissan was attempting to transfer the public's love for the 300ZX to the new Altima. As far as I can tell, this play never worked and sales of the Altima never reached the levels that Nissan had hoped for. And, a new version of the Nissan 300ZX, to be called the 350ZX is scheduled to be released next year.

This doesn't mean that Nissan has given up on presenting the Altima as a "Sports Sedan," and the latest version of the Altima is Nissan's latest attempt. (See *photograph 1.*) Billed as a high-performance mid-level priced sedan, Nissan has high hopes for this most recent version of the Altima. The new Altima was originally introduced in the fall of 2001 as a 2002 vehicle.



1. 2002 Nissan Altima.



2. The TT-1015 tool is inserted as far forward in the door as possible.

Continued on page 36

Continued from page 34

Like most of the new generation of Nissan vehicles, the linkages inside the doors are well shielded. Fortunately, the weather-stripping at the base of the window is more like that found on the Maxima, rather than that used on the Sentra. The Altima can be unlocked relatively easily with the Tech-Train 1015, "Under Window" tool.

The first step in unlocking the Altima is to wedge open the base of the window near the front of the door. (See photograph 2.) Because of the multi-layer weather-stripping that is used at the base of the window, you will have to use caution while wedging open the weather-stripping in order to insert the tool. To protect the weather-stripping, I begin by inserting a small plastic card between the glass and the weather-stripping. I then insert the wedge between the plastic card and the glass, pulling the card out after the tip of the wedge is below the level of the deepest lip of the weather-stripping. This will prevent the lower layer of weather-stripping from folding under your wedge.

Quick Reference Guide

Vehicle: 2002
Nissan Altima

Direction of Turn: Clockwise on the driver's side door. (Passenger side door is not equipped with a lock cylinder.)

Tool: TT-1015

Lock System: Nissan 10-Cut system with transponder

Bitting: Ignition 1-10, Doors and Deck 3-10, Glove Box 7-10

Security System: Transponder system standard equipment

Code Series: 00001 - 22185

Key Blank: Ilco: NI01T; Jet: DA34-PHT



7. Use the plastic card to protect the weather-stripping on the inside of the window just as you did on the outside.

Continue using the plastic card to protect the weather-stripping as you insert the tool into the door. (See photograph 3.) When the upper bend of the tool is below the bottom of the window glass, flex and lift the tool so that the upper bend slides up the inner surface of the window glass. The exclusive flattened top edge of the TH-1015 tool helps to guide the tool into the

proper position to slide past the weather-stripping. The tool can also be lubricated with a silicone lubricant or dishwashing liquid to help with the insertion.

As soon as you are sure that the tool is in position to be pulled up on the inside of the door, stop and remove the wedges from the door. It is very important to remove the wedges prior to pulling the tool up on the inside of the door. Failure to remove the wedges can result in breaking the window glass. Pull the tool up until the tip of the tool pops free of the weather-stripping inside the passenger compartment of the car. (See photograph 4.)

At this point, you will be ready to actually unlock the door. Manipulate the tip of the tool until it is in contact with the inside lock control rocker. (See photograph 5.) Then, by applying leverage to the handle of the tool, use the tip of the tool to manipulate the inside lock control rocker that is located inside the handle assembly. (See photograph 6.) Take care that you do not apply too much pressure to the tool. If the tip of the tool slips off the rocker it can damage the upholstered door panel or cause the window to break.

Unlike many vehicles that are equipped with multi-layer weather-stripping, the Altima uses multi-layer weather-stripping on both the outside and the inside surfaces of the window glass. In order to remove the tool easily you will once again have to use the plastic card to prevent the lower layers of the weather-stripping from folding under your tool. (See photograph 7.)

The door on the Altima is equipped with a substantial frame around the window allowing the vehicle to be unlocked easily with the Jiffy-Jak Vehicle Entry System. **INL**



3. Use a plastic strip or card to protect the lower layers of the weather-stripping.



5. Position the tip of the tool so that you can flip the inside lock control rocker to the unlocked position.



4. Stop and remove the wedges before you pull the tool up inside the door.



6. Lever the handle of the tool to move the inside lock control rocker into the unlocked position.

2001

part 1


Dodge



STRATUS



by Michael Hyde

Dodge	2001 MODEL YEAR
	STRATUS R/T
Different.	
PRICE INFORMATION	
MANUFACTURER'S SUGGESTED RETAIL PRICE OF THIS MODEL INCLUDING DEALER PREPARATION	
Base Price:	\$20,705
Dodge Stratus R/T	
Exterior Color: Satin White Pearl Coat	
Interior Color: Black/Light Gray	
Interior: Seats - Cloth Low-Back Bucket	
Engine: Engine - 3.0L V6 SOHC 24V	

1. This time out we are taking apart a 2001 Dodge Stratus R/T, 2-door hardtop. The 2-door hardtop Dodge Stratus and the 2-door Chrysler Sebring hardtop both use Mitsubishi locks and electronics. All models have the transponder system. The keyway is the MIT6/X263 type with a chip. Strattec makes the locks and keys for this car, use Strattec keying kit #704605.

DODGE R/T

OPENING PROCEDURES



2. The car has cable linkage instead of metal rods. The latch mechanism seems to be almost completely sealed from car opening tools. The weather-stripping is nice and tight and it doesn't seem like an over and under tool (caddy killer) could even get in there. I opened the car with one of those "Jack" (Jiffy Jack, Ultra Jack, Super Jack, etc...) tools every car opening company seems to have now. I just used an air wedge and the long metal rod that comes with one of those

"Jack" tools. This is a frameless door, so take care with the glass. There is a little ledge that is on top of where the door glass sits in when the door is closed. I had to wiggle the glass out of the ledge to get the air wedge in. It wasn't a pretty sight but it did work without damage. There may be other ways to open this car so use whatever works the best for you.



Continued
from
page 38

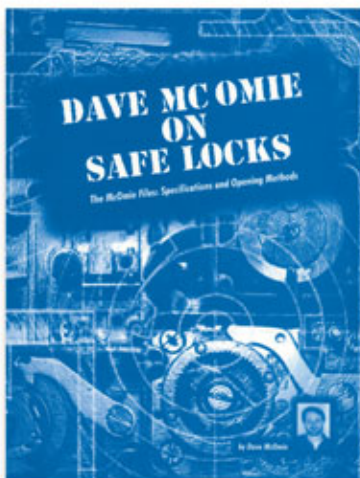
IGNITION LOCK

3. The ignition lock has a transponder coil around it and the lock cylinder is the active retainer type.

4. To service the lock you will need to remove the two-piece plastic shroud on the steering column. There are four screws on the underside and there is 1 screw next to the ignition lock face.



Dave McOmie on Safe Locks

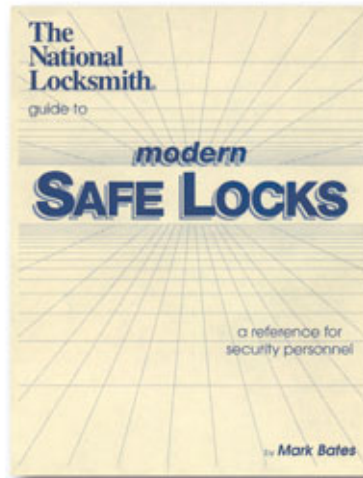


Almost 300 pages of information, photographs and illustrations give you every scrap of information about a huge variety of safe locks.

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#DMSL - 1

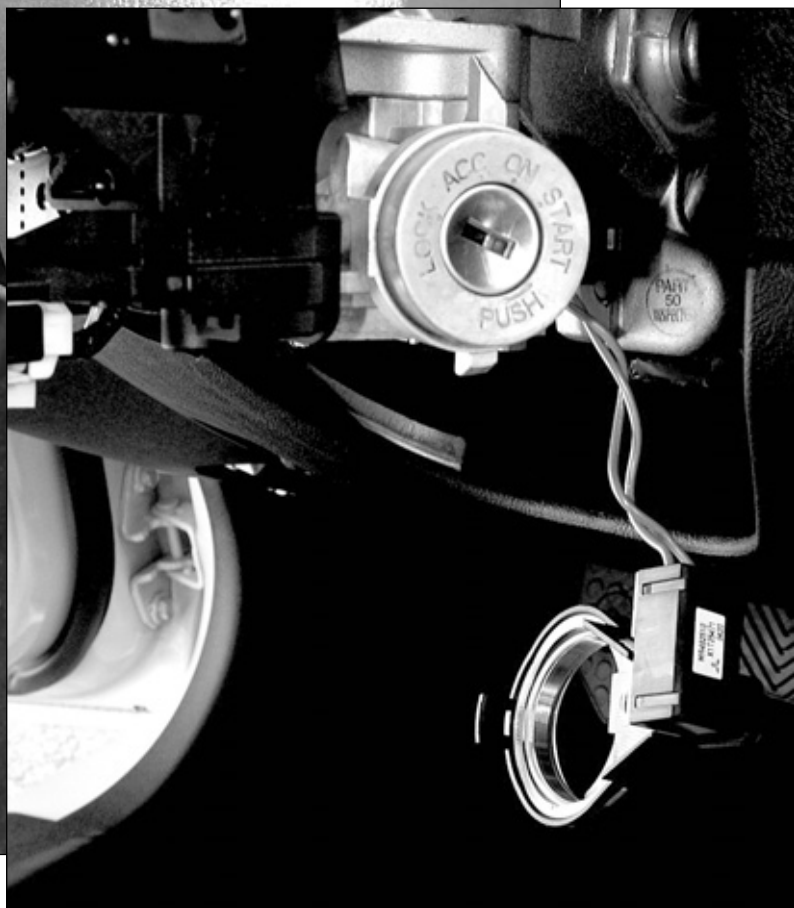
Modern Safe Locks



You always wanted to make money servicing safes?

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#MSL - 1



5. The face of the ignition lock has a transponder coil that can be unsnapped and moved to the side.

Continued on page 43



Modern Safe Opening

This book is a step-by-step How-To course in safe penetration. Opening safes is one of the most profitable aspects of the locksmithing business.

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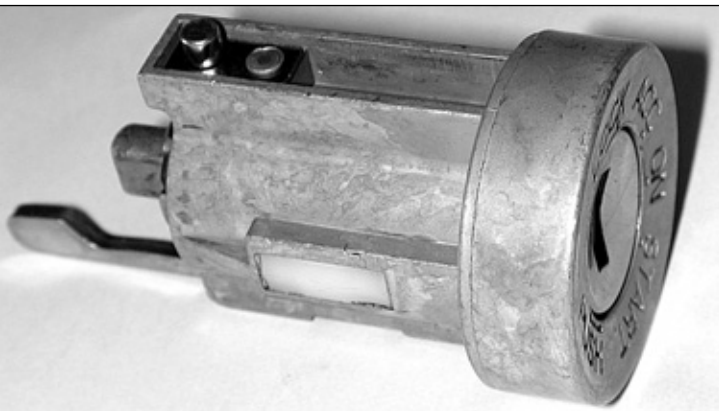
#MSO - 1



Continued from page 41



6. This is an active retainer ignition. The retainer is at the 9 o'clock position. You must have a working key in the "On" position. Depress the retainer and release. If you do not have a working key you can always impression the lock or drill the cylinder and replace.

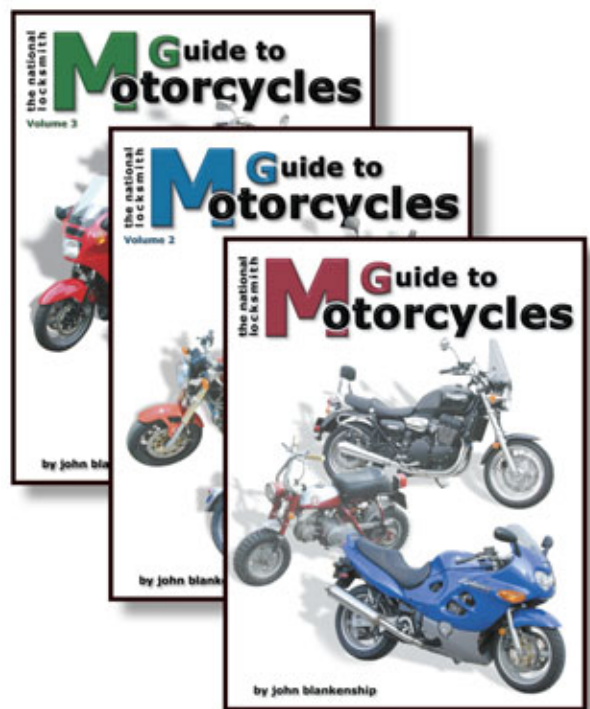


7. The ignition lock cylinder looks pretty much like other late model Mitsubishi ignition locks and very similar to Toyota ignition locks.



8. You will need to remove the tru-arc ring on the back of the lock cylinder.

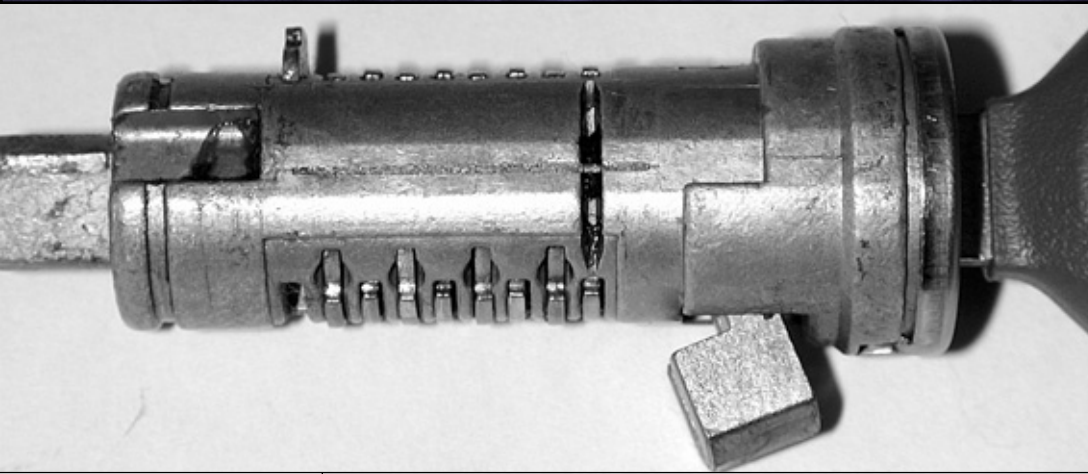
Guide to Motorcycles Volumes 1, 2 & 3



For years locksmiths have begged
for a comprehensive service
manual on motorcycles
and its finally here!

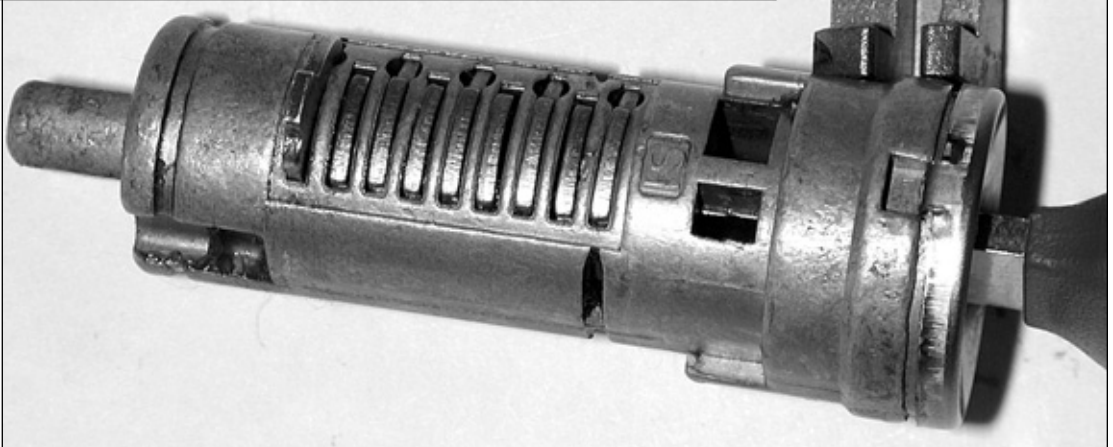
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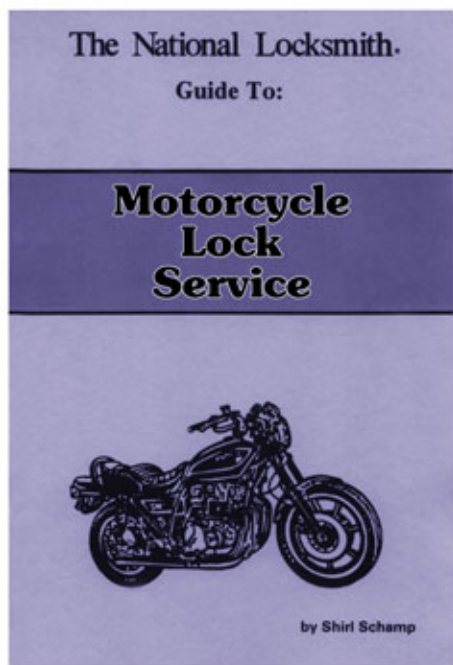
10. The cylinder plug contains all 8 tumblers for a complete key. There is also a tumbler for the “Push-to-Lock” part of the lock; it does not interfere with picking the lock.

9. The lock cylinder plug has one of those buzzer detents that can fall out and onto the floor before you even notice what happened to it.



Next month we conclude servicing the 2001 Dodge Stratus by covering the door lock, boot lock, glove box lock and programming procedures.

TNL



Motorcycle Lock Service

This book contains full details on everything the locksmith needs to know about motorcycle locks.

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#MLS-1

SHOWSTOPS ISCC

RCI EASY READ-PROX™ READER AND MINI-FOB

RCI has redesigned their popular Easy Read-Prox™ Reader and Mini Fob to fit a wider range of applications. The new models are now even smaller in size, making this system one of the smallest Prox Readers on the market today.

The front profile has been improved with a new low profile design making it even more discreet. The LED's are now brighter and aligned horizontally, so they are more visible from a wider viewing range. And, they've changed the min fob. At half the size of the original model, it can be easily attached to any key chain, tucked in a pocket or purse.

Designed for up to 10,000 users, RCI's Easy Read-Prox™ system is the ideal choice for interior and exterior security applications in institutional, industrial, commercial or residential buildings. The improved aesthetics of the new reader and key fob will also make it a popular choice among architects and other building specifiers.



EBERHARD MANUFACTURING COMPANY'S ADJUSTABLE COMPRESSION LATCHES

Eberhard Manufacturing Company has introduced the No. 634/637 Series Trigger Latches. The No. 634 and 637 are adjustable compression latches that are activated by a push-button. The rugged, durable latches are designed for installation on a wide range of cabinetry panels where a low profile is desired.

The Trigger Latches have a grip range of from .13" to 2.25". They are available in both key-locking and non-key-locking versions. They are also available in black or chrome finishes. All versions feature a universal mounting hole.



All components on the Trigger Latches are die cast. Their black or chrome finishes give the latches an attractive look that complements a wide range of cabinet finishes.

VISONIC NOW INCLUDES SOFTWARE

Visonic has added the ProxSoft™ Software to the Prox-in-a-Box™ Kit. The ProxSoft™ Software allows dealers to easily define and manage up to 3000 users, log and display system events, define eight time zones and four holiday types, and backup valuable system data and user information.

Prox-in-a-Box™ has all of the features associated with large



complex systems all at a fraction of the cost and can expand to up to 16-doors by connecting up to 4 controllers. The Prox-in-a-Box™ convenient start up kit includes a 4-door controller, LCD Keypad, 2 Prox Readers, 25 Prox cards, transformer, enclosure and more.

INTELLIKEY™

Intellikey is providing convenient, effective, and cost-efficient security for the Midwest Express Center in Milwaukee. The center and the arena were equipped with standard mechanical lock-and-key systems during construction and renovation. By choosing Intellikey, the WCD was able to stretch its budget to complete the project.

Intellikey, from Corbin Russwin, is a stand-alone, programmable, electronic access-control system for interior and exterior doors.

Having used Intellikey for nearly a year, one of the most important aspects is the ease with which it can be reprogrammed to accept and reject keys. The controller key also permits permanent deletion of a key. Reprogramming can be handled in-

house and the only maintenance required is battery pack replacement, which also can be handled by staff.

COMPUTER MANAGED STAND ALONE LOCKSET

The battery powered E72 EntryCheck incorporates all the sophisticated features professionals expect with hardwire systems. Keypad or computer programmable, E72 features include 300 users, 16 button alpha-numeric keypad with dual depression capability, 3-9 PIN code lengths, 233 million possible codes, 1,600 event history, 150,000 cycle battery life, 9 management group levels, 90 user groups, unlimited time zones, 1,800 scheduled events, double code entry. Programming and event



history for 200 locksets transferred via infrared data transmission device.

SECO-LARM CCTV CAMERA LINE

SECO-LARM U.S.A., Inc., is now offering CCTV cameras aimed at monitoring a variety of spaces, under a wide range of conditions. Two medium and hi-resolution color and two medium and hi-resolution black/white CCTV cameras allow a full range of protection, under most conditions.

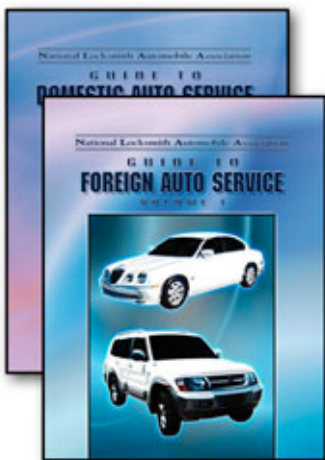


The company's CCTV cameras feature 1/3-inch CCTV chips and sensors from Sony for optimum resolution and clarity in areas with minimal lighting.

The cameras accept both CS-mount and C-mount lenses. Built-in

NLAA Guide to Domestic Auto Service

NLAA Guide to Foreign Auto Service



You get car opening, lock removal and service, column service, key and code series information, and many views of the doors, panels and locks.

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linelock synchronization allows multiple cameras to connect to a single video display monitor without interfering with each other. Several programmable functions such as shutter control, backlight compensation, and gain control give installers complete control over the cameras' capabilities.

The cameras measure only 4.9 x 2.2 x 2.1 inches (125 x 57 x 52 mm), and weigh only 24 oz. (680g), allowing them to be easily installed in any location.

SPECTRUM® DIGITAL DUPLEX INTERCOM SYSTEM

Jeron's Spectrum® Series Security Intercom offers multiple choices and powerful solutions for facilities of all types and sizes. The Spectrum Digital Duplex Intercom System has the flexibility for efficient and effective hands-free or private two-way voice communication throughout an entire facility.



For instance, high-speed connections and clear, crisp voice quality, the Spectrum family of products offer solutions for a wide variety of security applications including secured entryways, parking structures, elevators, stairwells, dock areas, storage rooms, etc.

Spectrum is the smart and economical choice for small and large facilities requiring anywhere from 2 to 9,072 stations internally or across wide geographical areas. The digital signal processor instantly adjusts loud speaking volume levels to compensate for acoustically difficult locations. This master-to-master intercom is fully digital, providing immunity from interference and assuring natural, clear voice communications from anywhere in the room.

SCHLAGE COBRA LOCK

Schlage and Locknetics, two prominent IR Security & Safety brands, announce a new, jointly developed electronic cylindrical lockset packed with unsurpassed customer value. Comparably priced to existing mechanical and electronic numerical code locks, the new Schlage COBRA



can store up to 100 codes and allow administrators to easily add or delete users in seconds.

With the Schlage COBRA, up to 100 different codes may be stored and adding or deleting a user is less than a ten second process.

The COBRA is designed to meet Grade 1 standards, has an architecturally appealing design, and is available in five finishes. As a result, it complements any decor. Until it receives an authorized code, the clutching lever simply gives way, discouraging vandals and others from breaking it to gain entry. By placing the electronics on the secure side of the door, security is additionally enhanced. The COBRA operates on four off-the-shelf, AA alkaline batteries, which provide 80,000-plus cycles or approximately three years life.

SECURITRON AWARD WINNING EXIT DELAY DESIGN

The Securitron Magnalock iMXD is a one-piece exit delay package that includes built-in delay electronics, audible alarm, keyswitch for reset and authorized release self-contained in a stainless steel housing. The iMXD can be easily configured to meet virtually all local and national fire codes governing delayed exit.



NLAA One Year Membership



The big problem in automotive locksmithing is the tremendous amount of information you need to have at your fingertips.

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NSO One Year Membership



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The iMXD Series works with existing fire and non-fire doors rated hardware with no obvious initiate switch that eliminates tampering. Unlike other door movement devices, the iMXD does not cause "false alarms" due to changes in building pressure or door "rattling" by using the reverse action plunger to allow code compliant door - movement initiation, up to 1 inch, while allowing automatic door return re-latch in case of accidental exit delay initiation. Exit delay can be reset via the keyswitch or automatically upon door closure (depending on the Fire/Life safety code followed by the local jurisdiction) without the need for additional external switches.

The EXD-1 allows an individual to exit an emergency door after an irrevocable 15 or 30-second delay while an audible alarm activates. Unlike electromechanical locks that block the exit, the EXD-1 system uses no moving parts to secure the door.

**SCHLAGE CM
SAFE SCHOOL LOCKS**

The stand-alone, battery-powered lock includes an iButton™ reader which a faculty member immediately touches



with an iButton to lock a classroom's exterior lever from the inside without having to open the door. An inside LED display provides verification that the door has been locked.

The Safe School locking system can be computer-managed with Windows-based Locknetics LockLink™ or LockLink Express software. Programming of each lock is easily accomplished using a laptop computer or PDA. The same software will also upload and download information from other IR EACD locking systems, including Recognition Systems biometric HandReaders.

Administrators can manage up to 1,000 users or provide audit trails for the last 1,000 events. A SmarTime feature allows the Schlage CM School Safe locks to be programmed to unlock at a specific time at the beginning of the school day and to lock at a specific time after dismissal. No longer do custodians or administrators need to spend time unlocking and locking classrooms. Complements any decor, the Safe School lock is available in five architectural finishes with three lever styles and cylindrical, mortise or unit locks.

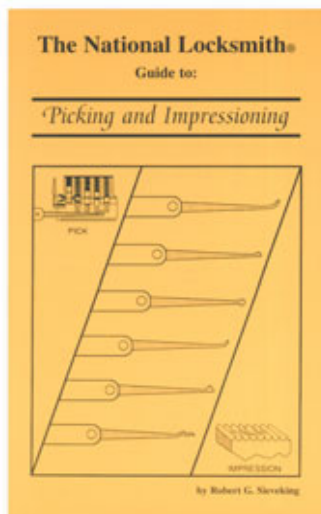
**VIDEX ANNOUNCES
CYBERKEY™ VALIDATOR**

With Videx Cyberkey™ you receive entry authorization on demand and long-distance programming of electronic keys!



CyberKey™ Validator provides key control in applications with high personnel turnover. Users receive their access privileges each day at the exterior of a facility by inserting their key into the Validator station. With the ability to authorize keys on an as-needed basis, Validator eliminates problems associated with lost keys and unauthorized entry. The system eliminates key duplication and wrongful entry by someone using a key outside of an assigned work schedule. **RL**

Picking & Impressioning

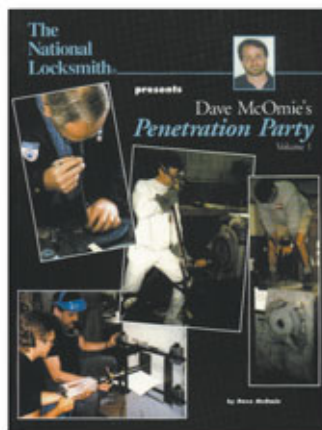


Here is the most complete book ever published on picking and impressioning locks! You will have everything you need to know about how to open almost every kind of lock that can be picked.

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#PI

Penetration Party



- Uncensored!
- The Safes!
- The Tools!
- The Action!
- The Perfect Openings!
- The Bloopers & Blunders!
- The Slick Tricks!

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#PP - 1

ABUS

Long Shackle Resettable

clearance. The package labels indicate a suggested use for marine applications. The combination of a stainless steel shackle and a non-corrosive brass body, I suppose, also suggests the padlocks are suitable for just general outdoor use where they face exposure to rain or snow.

Basic Resettable Padlock Operation

Both the short and long shackle versions of these ABUS brass body combination padlocks are four wheel/dial resettable combination padlocks. They operate on the same basic principle as standard locks of this class or type. Each of the four wheels is numbered 0 to 9 with a total of ten possible variations per wheel. Multiplied out to account for the four wheels, there are 10,000 possible different combinations. Most locks of this type come with the factory default combination of all zeroes. As a four wheel resettable combination lock, that combination is: 0-0-0-0. That factory set combination is visible in the bottom face view. (See *photograph 2*.) Like most other resettables of this type, dialing the correct combination and pulling outward on the shackle doesn't open the lock.

Opening a typical resettable combination padlock of this type involves three basic steps. First you dial the correct opening combination, as was already done in

photograph 2. Next, push the shackle in toward the padlock body. (See *photograph 3*.) It may look as if you are trying to close the shackle into the locked position, but you are actually trying to open it. Then you let go of the shackle to allow the shackle spring to push out the shackle. (See *photograph 4*.)

The opening procedure doesn't seem to make a whole lot of sense, but if you saw the internal workings of the lock, you'd understand why it opens that way. If you didn't push in first, and instead just tried pulling out very hard on the shackle there would be not very desirable results. You'd either not open the lock, or (if the shackle came out by pulling alone) you'd break the lock. About a year or so ago, I did a series of articles that showed the internal workings of these kinds of locks, so I won't go into more detail about the mechanics of opening here.

Resetting the Combination

If you wanted a resettable combination padlock in the more common alternating direction change dial (with a single dial that is rotated back and forth right-left-

Continued on page 52

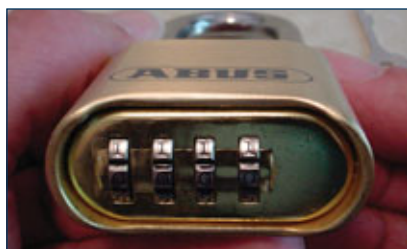


by
Sal Dulcamaro,
CML

ABUS is the maker of a diverse variety of padlocks. It is a German lock company, but the locks are distributed and sold in the US market through A. P. Steele in Plymouth, Minnesota. ABUS has recently introduced a long shackle version of its brass body resettable combination padlock. *Photograph 1*, shows the earlier design short shackle padlock on the left and the newer design longer shackle padlock on the right. Although an optical illusion makes the short shackle padlock look wider, both the short and longer shackle padlocks have 2" wide bodies. The standard length shackle has a 1" clearance, while the new longer shackle padlock has a 2-1/2"



1. A short and the newer longer shackle padlock.



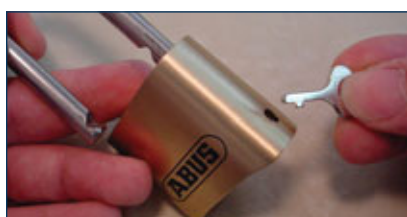
2. The factory set combination.



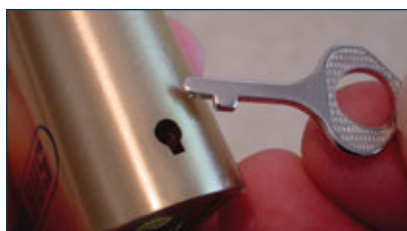
3. Push the shackle in.

Continued from page 50

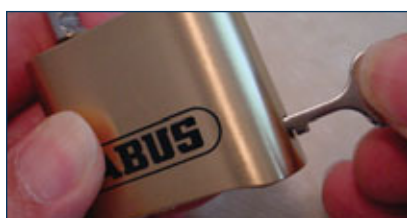
4. The shackle spring pushes out the shackle.



5. The change key.



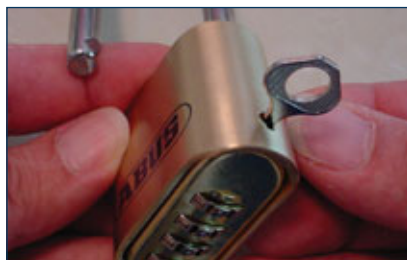
6. Keyhole for the change key.



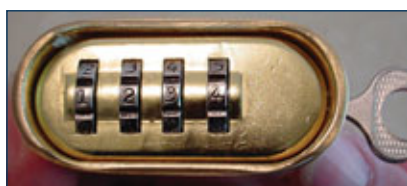
7. Insert key completely.

right, etc.) setup, you'd have to pay quite a bit of money. Sargent & Greenleaf makes a relatively expensive combination padlock in that general format (alternating direction change dial), but the combination is changed much like a safe combination lock and it uses a similar style change key. The ABUS resettables, as are the predecessors of this same basic type, have been specifically designed to allow combination changing with minimal time and effort while still being moderately priced.

Some brands of resettables require a special changing tool that inserts into the open shackle hole,



8. Rotate key 1/4 turn.



9. I reset the combination to 1-2-3-4.



10. Rotating the change key back to release.

while others use a tool or change key that inserts into an opening elsewhere in the padlock body. The ABUS resettables use flat steel change keys that resemble a small warded type key. *Photograph 5*, shows the change key at the opening of the change key hole. The keyhole is located on one of the narrow sides of the padlock near the bottom face that contains the wheels/dials. A close-up view in shows much greater detail of the key and keyhole. (*See photograph 6.*)

When preparing to change the combination on a multi-wheel resettable padlock, always make sure the current correct combination is displayed. You obviously need to dial the correct combination to open the lock, but it is possible to move the dials while the lock is open. Make sure the current combination is in place before inserting the change key. If the wrong combination is displayed while changing the combination, you could lose the combination and end up having to decipher the new unknown combination.

The current combination of 0-0-0-0 is still undisturbed in as I insert the change key. The change key must be

pushed in all the way. (*See photograph 7.*) You will feel some spring pressure resisting your effort to insert the change key. When the change key is inserted far enough, it will be able to rotate. You will need to rotate the change key 1/4 turn. (*See photograph 8.*) It doesn't matter if you rotate left or right, as long as you turn it one quarter. The purpose of rotating the key is to keep it locked in place and so it won't push back out while you are resetting the positions of the four dials (or wheels). If you let the change key back out while you are changing the combination, you may not reset all of the wheels. Your new (unknown) combination could be part of the old combination and part of the new (intended) combination.

Even worse, you may just randomly scramble the combination so that the new (unknown) combination contains few or no common digits of either the original or newly intended combination. I can't emphasize enough that you should not insert the change key until the combination is returned to the current opening combination, and that the change key should remain fully inserted and seated (rotated a quarter turn) while you are resetting the combination.

In *photograph 9*, I have reset the combination to 1-2-3-4. You can see that the change key is still inserted and rotated a quarter turn. Make sure that the digits are in line with each other and centered properly. You should feel a clicking action when they are in place. If you are certain that the number pattern displayed is the new combination that you want, rotate the change key back a quarter turn (opposite the direction you turned it originally). I am rotating the change key back, to release the change key and to lock in my new combination. (*See photograph 10.*)

The ABUS resettables are easy to use and the combination can be easily changed in less than a minute. If you are looking for a lock of this type that resists corrosion and rust, you now have two lengths to choose from when you pick ABUS. For information on these and other ABUS padlocks, call 800/225-5348. Otherwise contact your local lock wholesaler or another supplier that carries ABUS padlocks. Circle 266 on Rapid Reply. **NLI**

Literature & Brochures

For more information phone:
(800) 872-3267; Fax: (800) 232-
7329; Website: www.adamsrite.com.

American Security Products

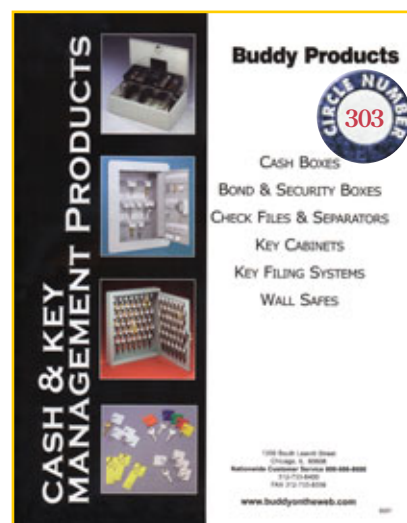
American Security Products is the world's best-known provider of security safes and security solutions. Since 1948, we have protected the assets of our clients throughout the world by providing a broad array of safes and security consulting services with the highest degree of quality, integrity and responsiveness.



For more information phone:
(800) 421-6142; Fax: (909) 685-
9685; E-mail: sec@amsecusa.com;
Website: www.amsecusa.com.

Buddy Products

Buddy Products offers several items in their cash and key management line. Some of the different cash boxes they offer include petty cash boxes like their lock down cash boxes and bond and



A & B Safe Corporation

The A & B Product Catalog covers the most extensive and diverse array of depository safes and chest available from the industry today. A & B's in stock inventory includes over seventy-five models, which are ready for shipping on the same day as receipt of purchase order.



For more information phone:
(856) 863-1186; Fax: (856) 863-
1208; E-mail: info@a-bsafecorp.com;
Website: www.a-bsafecorp.com.

Adams Rite Product Directory

The Adams Rite Product Directory presents a comprehensive overview of Adams Rite architectural hardware products. Included are Adams Rite's complete line of Exit Devices, their Grade 1 and Compact Electric Strikes and they're Locks & Latches for both swinging and sliding doors. Also prominently featured is The Rite Door®, Adams Rite's Integrated Door System, designed to be a single, all-in-one solution for fire-rated and life-safety single or double doors.



security boxes. Other items include their key cabinets, key management systems, and wall safes. All of their products use rich, embossed, textured steel.

For more information phone: (800) 886-8688, Fax: (312) 733-8356; Website: www.buddyontheweb.com.

Clark Security

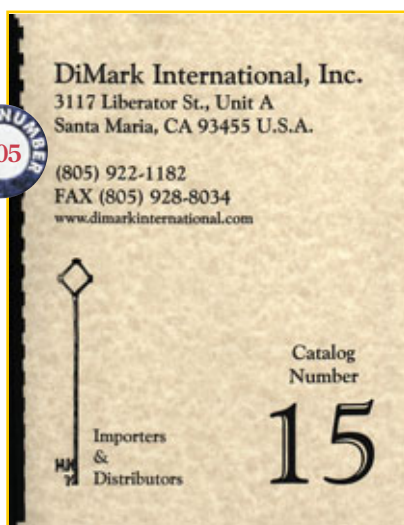
Clark Security Products is proud to announce the release of our newest full line product catalog. This catalog is 1,832 pages representing about 350 manufacturers and over 35,000 items. It is a comprehensive resource for all security professionals. It contains application guides, ordering charts, detailed images and descriptions, cross references, and much more. Please ask your Clark Security Products sales representative for your copy today! Or you can check out this information on line through our web catalog at www.clarksecurity.com.



For more information phone: (800) 854-2088, (858) 505-1950; Fax: (858) 495-0775; E-Mail: webmaster@clarksecurity.com; Website: www.clarksecurity.com.

DiMark International, Inc.

DiMark International of Santa Maria, California, publishes an interesting catalog. It includes hard-to-find items from around the world, which solve many of the unique problems locksmiths encounter in their work. Quality key machines lead the parade of carefully selected tools and locking devices, including a wide selection of antique-style furniture locks and keys.



For more information phone: (800) 235-2435; Fax: (805) 928-8034.

Door Controls International

Door Controls International 2000 Catalog is a concise and descriptive presentation of our products, making it comprehensive to the customer by taking the hassle out of ordering commercial security hardware.

The catalog's "General Information" section provides listings, approvals, and product conversion data. Products have been indexed both alphabetically and numerically for

Pocket InstaCode



Pocket InstaCode has all the important features of the InstaCode program, packed into a program small enough to run on a Pocket PC.

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#PCODE-03

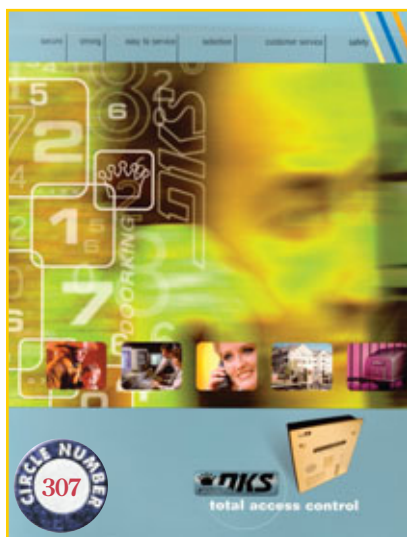
easy item location. There are 10 product sections organized for your convenience into related product categories, and a template section for all appropriate products.



For more information phone: (800) 742-3634; Fax: (800) 742-0410; E-mail: sales@doorcontrols.com; Website: www.doorcontrols.com.

DoorKing

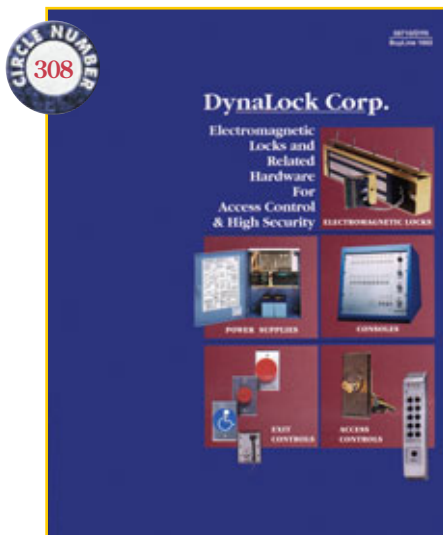
DoorKing's 56-page full color catalog describes the companies product offerings in four distinct product categories: telephone entry and multi-door access control systems; stand-alone access control products and locking devices; vehicular gate operators and parking control products. The catalog also has a section that contains general information about the company and its products. The catalog is free upon request to businesses in the industry.



For more information phone: (800) 826-7493, (310) 645-0023; Fax: (310) 645-7431; E-Mail: info@doorking.com; Website: www.doorking.com.

DynaLock

DynaLock's short form catalog outlines electromagnet locks and related hardware that they manufacture. Products include a full family of magnetic locks, delay egress systems, power supplies, egress sensor bars and custom control and monitoring consoles. A mini-CD is available that includes a full line catalog and price book.



For more information phone: (877) DynaLock; Website: www.dynalock.com.

Framon

Contact Framon for your free copy of our new 2002 catalog. Our entire line of key machines is included, as well as information on our tools and software programs. Inside the catalog is an order form for our free video rental (credit card number required), as well as information on our company and customer testimonials.

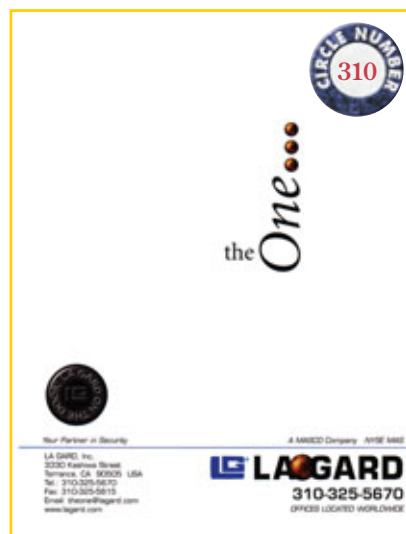


For more information phone: (517) 354-5623; Fax: (517) 354-4238; E-Mail: framon@northland.lib.mi.us; Website: www.framon.com.

La Gard

The La Gard Catalog is shrink wrapped and ready to be placed in any three ring binders. It contains product sheets on all La Gard products. Divider tabs, labeled by product name, make everything easy to find.

In a separate shrink-wrapped package, La Gard provides our 2002 Manufacturers Suggested Retail Price List. If you already have a La Gard Catalog and want to update your price list with this year's current prices, just ask us to send the price list alone.



For more information phone: (310) 325-5670; Fax: (310) 325-5615; E-mail: theone@lagard.com; Website: www.lagard.com.

MAG Security

MAG Security's architectural hardware catalog contains line art



and specifications, as well as a quick reference-pricing guide for its broad line of products. The company also produces custom made items to order.

Product information is available on the Website at: www.magsecurity.com.

MMF Industries

MMF Industries' Key Control Catalog offers a wide selection of steel, locking key cabinets with capacities for 10 to 715 keys. The catalog contains a full line of key control accessories, such as key tags, record sheets, and on-person key control, such as wrist soils. Also included are lock boxes, designed to hold anything from medical supplies to cash and important documents.



For a free Key Control Catalog phone: (800) 323-8181.

Omnia Industries, Inc.

Omnia Industries is proud to announce the introduction of our brand new, full color Latchsets & Locksets Catalog.

This new edition regroups all of our lever and knob latchsets and



locksets. In addition, it includes a number of new products that are being revealed for the first time.

We have added two new narrow backset mortise locks and a redesigned privacy bolt. All technical data has been updated, making this a complete and useful guide to use through our lockset selections.

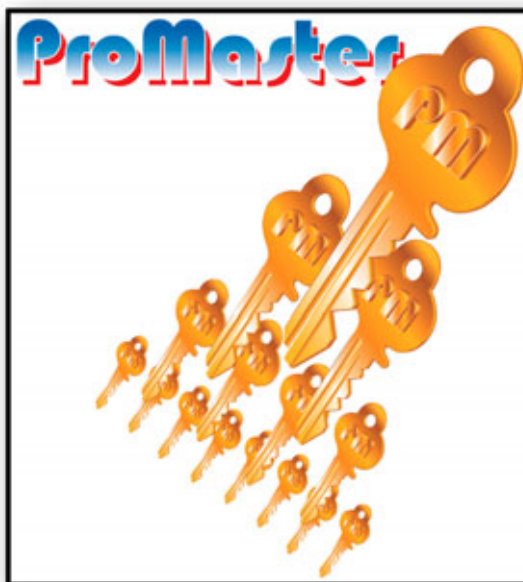
For more information about Omnia Industries, Inc. phone: (973) 239-7272; Website: www.OmniaIndustries.com.

Salsbury Industries

Salsbury Industries is the industry leader in manufacturing



ProMaster 5



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#PM - 5

and distributing commercial and residential mailboxes. Products include residential mailboxes and posts, vertical and horizontal mailboxes, cluster box units, collection boxes, custom signage and postal specialties.

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SDC's 30th Anniversary

Security Door Controls was established in 1972 with the introduction of the first narrow bolt lock design. Thirty years later, SDC continues to introduce innovative new products to the access control industry. SDC's quality, performance, and commitment to customer satisfaction has been proven time and time again; through an ISO 9001 Certified Quality Management Program, Lean Manufacturing System, new shipQUICK program, as well as nine Security Industry Association awards to back their reputation. SDC's 30th anniversary is marked by the introduction of a new twenty-four-page product brochure featuring an SDC corporate profile, industry awards and achievements; and twelve new products and full color product photos.

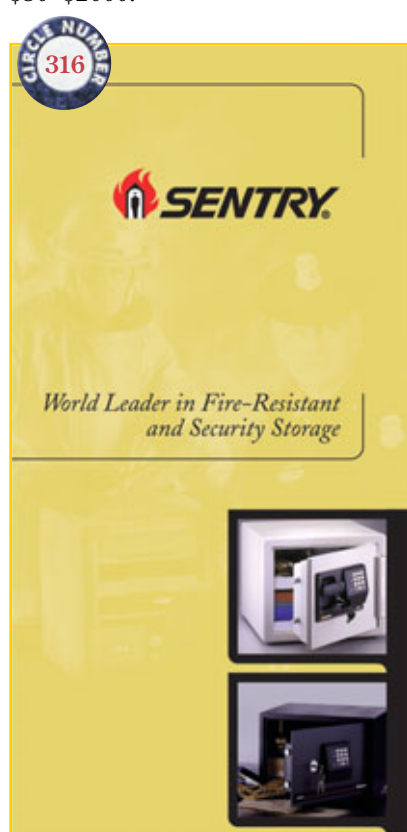


For more information phone: (805) 494-0622; Fax: (805) 494-8861; E-mail: service@sdsecurity.com; Website: www.secsecurity.com.

Sentry Group

Sentry Group is the world leader in the manufacture of fire-

resistant and security storage containers. Sentry's catalog showcases the full range of safe storage products offered to fit most any personal or business need—ranging from small in-home safes, to larger fire and security rated commercial and gun safe models. Prices range from \$30-\$2000.



For more information phone: (800) 828-1438, (716) 381-4900; Fax: 716-381-8559; E-Mail: k_brosius@sentrysafe.com; Website: www.sentrysafe.com.

Steck Manufacturing Company, Inc.

Steck's 2002 Catalog of Autobody Tools and Equipment features the BigEasy Lockout Tools Kit and the new LittleEasy Lockout Tool. The catalog also features Steck's original line of Lockout Tools and Steck's Lug-Off Sockets for removing locked and damaged lug nuts without a key. The Steck catalog contains a variety of trim and glass tools plus the new Pro Step Work Stand, the adjustable work stand that is designed specifically for working around vehicles.



For more information phone: (800) 227-8325; Fax: (937) 222-6666; E-mail: steckmfgco@earthlink.net; Website: www.steckmfg.com.

Strattec

"Strattec is now offering product information in the traditional printed form as well as on a searchable CD-ROM called PartSearch. Anyone using the CD will understand how simple it is to find the same application information that has been included in the printed catalog in a fraction of the time. Both the catalog and CD are updated annually and available from your Strattec distributor."



For more information phone: (414) 247-3333.

Tripp Lite

Tripp Lite's PowerVerter General Purpose Inverters are the economical solution for mobile power needs. Harnessing the

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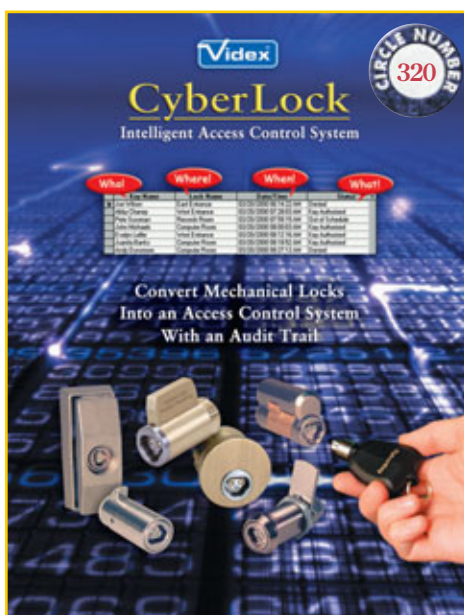
battery power of your automobile, RV or service truck, PowerVerter Inverters let you use power tools at an out-of-the-way work site, household appliances at your campsite, or office equipment on the road. Unlike gas generators, PowerVerter provide continuous, environmentally friendly power without generating dangerous fumes or loud noise. PowerVerter are safe for indoor use and require no maintenance.



For more information phone: (773) 869-1234; Fax: (773) 869-1329; Website: www.triplite.com.

Videx Access Control

Videx manufactures CyberLock®, a family of electronic lock cylinders that quickly converts existing mechanical locks into a comprehensive access control system, without wiring. These



intelligent cylinders grant access to authorized users for specified days and times. Both lock and key record all entries and denied entries, providing a precise record of who, what, when, and where for management review. CyberLock cylinders include: switch lock, T-handle, cam, small format IC, mortise, rim, 6-pin, and custom cylinders.

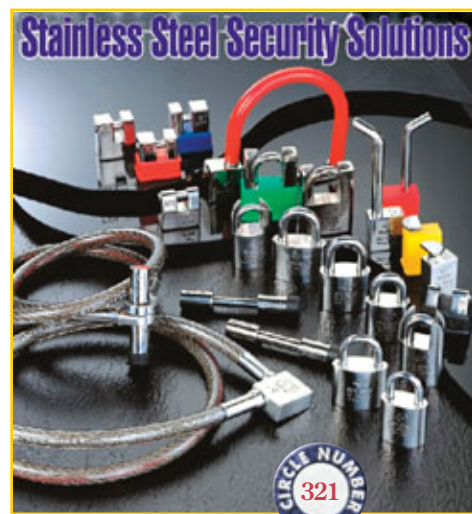
For more information about the CyberLock products, contact Videx by phone: (541) 758-0521; Fax: (541) 752 5285; E-mail: sales@videx.com; Website: www.videx.com.


W-Lok

Our new 2002 catalog contains 12 pages of high quality, high security, 100 % Stainless Steel locking devices. Each product page includes a full color photo, part number, line drawing and description/detail of the item.

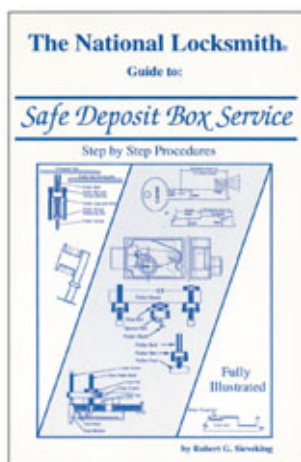
Each catalog includes a W-LOK corporate history, full 100-year warranty statement, trade publication article reprints and two quick reference product tri-fold brochures.

Whether you're in the need of PadLok, Guarded PadLok, OvalLok, Guarded OvalLok, MegaLok, LoopLok, VersaLok, ClampLok, ViseLok, MarsLok, TrailerLok or PinLok, W-LOK has it all!



For more information phone: (877) 355-WLOK; Fax: (616) 355-4295; E-mail: office@wlokcorp.com; Website: www.wlokcorp.com. 

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#SDBS - 1

W-LOK PRODUCTS

Entirely stainless steel, entirely secure.



There's nothing new about wanting to lock something up, lock someone out, or lock someone in. People have been trying to do it for thousands of years. But it wasn't until 1999, when W-LOK Corporation entered the marketplace with a stainless steel cylinder protected by worldwide patents, that everyone had access to such complete dependability and security in a padlock.

This heavy duty, all stainless steel lock is capable of withstanding tremendous physical punishment, as well as caustic substances, while remaining virtually impenetrable. And thorough testing has been done to prove it. Not only that, but the company has so much confidence in their products, they're willing to stand behind each one with their 100-year mechanical warranty. When it comes to security, this padlock is one you can really count on. For the next century, at least.

Incorruptible Stainless Steel Cylinders

Ordinary iron or brass padlocks have their place, but when it comes to protecting anything of real value or importance, you'll want stainless steel, through and through. Of course, these padlocks also have rotating discs, patented cylinders and a sleek, beautiful body. The tumblers, shackles, and even the shackle springs, where used, are all stainless steel. This is an extraordinary line of corrosion-resistant products that stands up to all manner and severity of tortures, both natural and man-made.

Salt water, for example, can be very damaging to padlocks used on boats and equipment, as well as anything else exposed to spray from the ocean. In colder climates, where salt and road chemicals are often used to maintain drivability on icy, snow covered roads,

padlocks on trailers or other moving vehicles can easily become corroded and useless. And in any climate, there is always the risk of a determined thief or vandal trying to force a lock open using all sorts of means, including a propane torch, or even acid.

Fortunately, there's a padlock strong enough to eliminate all these worries. In fact, after being submerged in 98 percent sulfuric acid for 24 hours straight, this cylinder still performs perfectly by opening with ease. These padlocks resist rust. They remain functional in the most extreme temperatures, from subzero to 1700° F (920° C). Some can even withstand a pulling force of more than 40,000 pounds. Now that's tough. With all this strength, you might not expect them to be particularly attractive, but these locks are beautifully crafted.



Padlock Products



ClampLock

A Lock There's Just No Getting Past

Today's modern version of the padlock was invented less than 200 years ago. Padlocks themselves, however, have been in use for at least 2,000 years, in countries throughout the ancient world. Yet in all that time, only one company has developed a padlock that maintains its integrity in practically any environment, and under the most strenuous physical attack. Theft and vandalism are two areas where these padlocks have proven themselves especially durable.

Typically a major cause of lock damage, vandalism no longer presents much of a problem. In fact, anyone who attempts to tamper with one by jamming super glue or chewing gum into the cylinder, is just wasting his or her time.

Such substances might easily ruin a traditional lock, but a thorough cleaning with acid, or use of a propane torch should completely remove them from one of these padlocks, without harming the lock, of course.

Thieves trying to force the shackle open will be totally

frustrated by the free-rotating, 360-degree discs. And anyone foolish enough to use their trusty drill in an attempt to open one, will be stopped dead in their tracks by the hardened stainless steel in the lead disc. This claim was put to the test by applying a hand-held drill with 3/16 bit at 1600 rpms for a full 15 minutes. Still, that lock would not open. No matter how persistent a thief may be, it seems there's just no getting past a W-LOK padlock.

Cylinders Both Unique And Replaceable

The patented, stainless steel cylinder operates under the same

basic principles as other similar cylinders. It uses nine discs that rotate 360 degrees, allowing the lock to be opened only when the key is inserted until fully engaged, then rotated 270 degrees (or 180 degrees for "A" series cylinders).

Occasionally, with other padlocks, circumstances dictate purchasing a completely new lock. With these, however, the lock-cylinder can simply be removed and replaced instead. This is a task performed quickly and easily by locksmiths in the field.

Adding to security is the fact that no two cylinders will ever be alike, unless specifically requested by the customer. Each padlock comes with its own warranty card containing the serial number for that particular cylinder, along with a password that's concealed by a rub-off coating. The owner of the lock, alone, has access to this one-of-a-kind password.

One-Of-A-Kind Keys

Even the keys are something special. Each one has a stainless steel bow and a cylindrical, nickel silver alloy NM6 shaft, with a 90-degree angle cutout along the length of the shaft, and a variety of angles machined along the top edge. The



Guarded Padlock

format allows for over a trillion possible key combination, and effectively eliminates any possibility of two customers receiving identical keys. This is a far cry from keys of ancient times, which ranged from L-shaped pieces of wood and contraptions made of wood and string, to Roman keys designed as finger



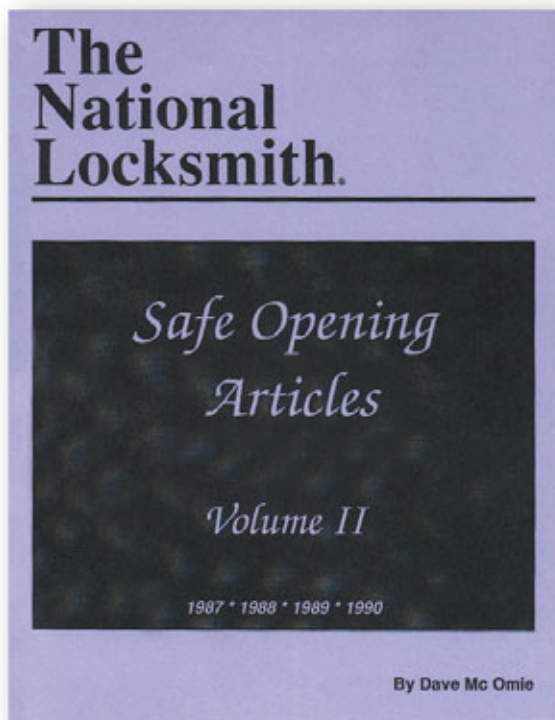
LoopLok

rings, because togas, although very fashionable, had no pockets. Other keys, presumably for the wealthy, were even inlaid with silver and gold. The key to a W-LOK padlock can certainly hold its own in the attractiveness department, but security is where it really shines.

The Keys To Security

Keys for these stainless steel padlocks are cut only at the factory, but even so, there are strict controls in place, which prevent the factory from releasing them directly to customers. Those needing additional keys must go through the dealer in the region where the padlock was originally sold. Before obtaining additional keys, a customer is

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Safe Opening Articles

Dave McOmie's original articles from when he first started writing for The National Locksmith are reprinted in this book.

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Continued from page 65

required to provide the dealer with the serial number of their lock's cylinder, along with the correct password. Only after the factory has received the serial number and password will new keys be issued to the dealer for distribution to the customer.

Of course, there are keying options for institutions and corporations wishing to control employee access in various areas. Master key, key alike, and key different systems are all available. So not only do you have the security of a superior lock, you also have the security of a superior key and keying system.

In The Market For A W-Lok?

This company has padlocks for practically any application or need. They're as ideal for construction sites, utility companies and transportation fleets, as they are for boat owners and outdoor enthusiasts.



MarsLok

Standard designs include a range of body sizes, shackle diameters and depths. In addition to these models are guarded shackles, which reduce access to the shackle. There's a lock for receiver hitches (called the TrailerLok) that offers two shackle diameters to choose from. Standard clearances for the hardened stainless steel shackle range from 1 inch to 1.5 inches. Optional clearance lengths of 2, 3, 4, 5 and 6 inches are also available.

Among the many interesting designs available are the MarsLok models, which are especially well suited for hasps and features a large-diameter shackle, fortified with stainless steel on both sides. The PinLok has a pop-up, removable shackle that can be positioned at two depths within the lock's body. By selecting the appropriate position,

users can minimize access to the shackle. The ViseLok can be used on hasps, as well as ball trailer hitches, while the ClampLok has a range of applications including securing bicycles, motorcycles, outdoor gates or even extension ladders, carried on top of the truck.

Currently, there are several new models on the drawing board, and the company is also willing to review OEM requests to produce locks using their patented cylinder.

The Ultimate Security

Padlocks shaped like scorpions were used in India to symbolize danger and frighten away thieves. Padlocks were used to give added protection to the mail, as riders of the Pony Express carried it through dangerous territory. Houdini often used padlocks of various kinds in his famous escape acts. From Viking corner shops in medieval Europe, to chests, brimming with pirate's treasure, people throughout time have been working to develop more reliable ways of safeguarding the things they held most precious. Too bad W-LOK wasn't around back then. These padlocks would have given all of them exactly what they needed. Well, all except Houdini, perhaps.



MegaLok

Anyone interested in learning more about this company and their stainless steel padlocks should visit the website at www.wlokcorp.com. The site provides videos that show some of the strength and corrosion testing as it's performed, as well as views of each of the many padlocks, along with complete descriptions and specifications on the wide variety of models and sizes. Company and support information can be found there, as well. **TNL**

Safe Opening Articles 1987



Now under one cover—all the information safe opening articles by expert safeman, Dave McOmie.

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#SA - 1

Anatomy of an Electrified Strike



by
**Richard Allen
Dickey**

Working with electricity can really be a lot of fun. The idea of something that you can't see, causing things to happen, is just fascinating. Turning electrical energy into mechanical energy is the topic of this article. What is inside an electrified strike and why does it work?

Most of you have at least seen, if not worked on, an electrified strike (*see photograph 1*). Some electrified strikes make a buzzing sound, and some are silent. They come in several sizes and are intended for one purpose: To open a door from the comfort of your chair. Even if that chair is down the hall or in another building.

Electrified strikes are operated by a solenoid. A solenoid is a device that turns electrical energy into mechanical energy. Solenoids come in many sizes (*see photograph 2*), but their design is basically the same. They consist of four main parts. A coil of wire, an iron core, a spring and an iron plunger (*see photograph 3*).

The plunger and spring are two of the easiest parts to understand (*see photograph 4*). The plunger slides in and out of the core. It is pulled into the core by electromagnetism and

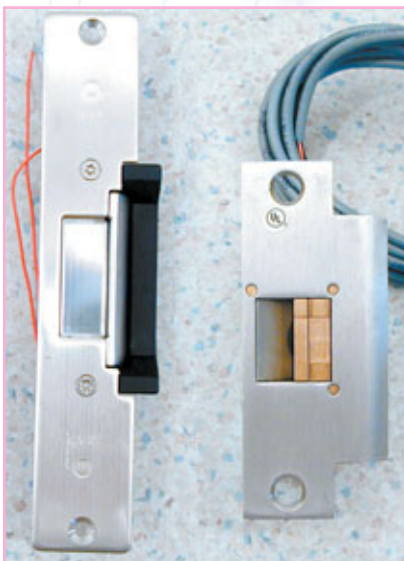
pushed out of the core by the spring. The movement of the plunger is what produces the mechanical energy to operate different devices.

The core and coil are the two parts that are less understood. They are protected by an outer housing. By removing the housing, you can begin to see the hidden parts of a typical solenoid (*see photograph 5*).

That plastic looking stuff is just a piece of protective material intended to protect the coil and its electrical connections from the outer housing (*see photograph 6*). With the protective material removed, you can see that the ends of the coil of wire are soldered to a larger, stronger wire (*see photograph 7*). This larger wire is used for the actual connection to a power source.

The coil is a long piece of wire that is wrapped around the core. The wraps around the core need to be

Continued on page 68



1. A couple of typical electrified strikes.



2. Solenoids come in a lot of different sizes.

Continued from page 66



3. The insides are about the same.



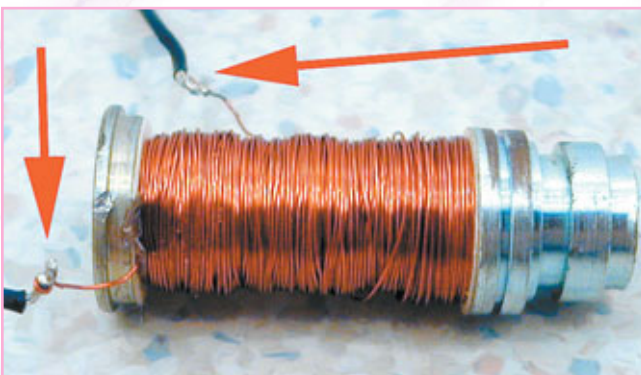
4. When you look at a solenoid, you typically see three parts, even though there are four.



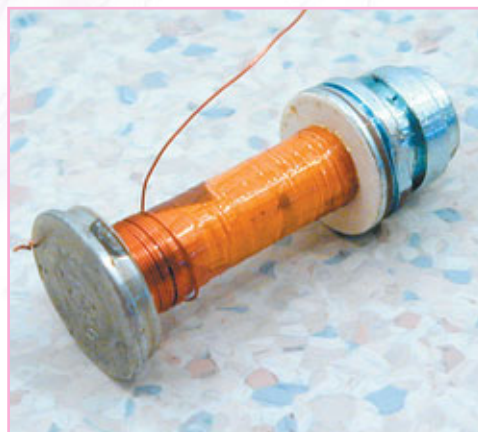
5. Here the housing is removed from the core and the windings.



6. Insulating material covers the coil.



7. Heavier wires are soldered to the smaller wires from the coil.



8. With most of the coil removed from the core, another layer of insulation can be seen.

very close together. The closer they are, the greater the effect the coil will have. To get the coil of wire wrapped very closely, the insulation on the wire has to be very thin. That is why varnish is used instead of plastic or rubber.

In *photograph 8*, you can see that most of the coil of wire has been removed. This exposes another layer of protective material at the base of the coil. Under the protective material is a type of sticky rubber stuff (see *photograph 9*). You can also see paper insulation at the end of the core. This is about all there is to a solenoid.

Why does it work? Well, this is where the fun begins.

To understand how the solenoid works, you need to understand the basics of electromagnetism. Don't worry, I have no intention of

dragging you through atoms and molecular structures. I just need to throw you a few basic concepts.

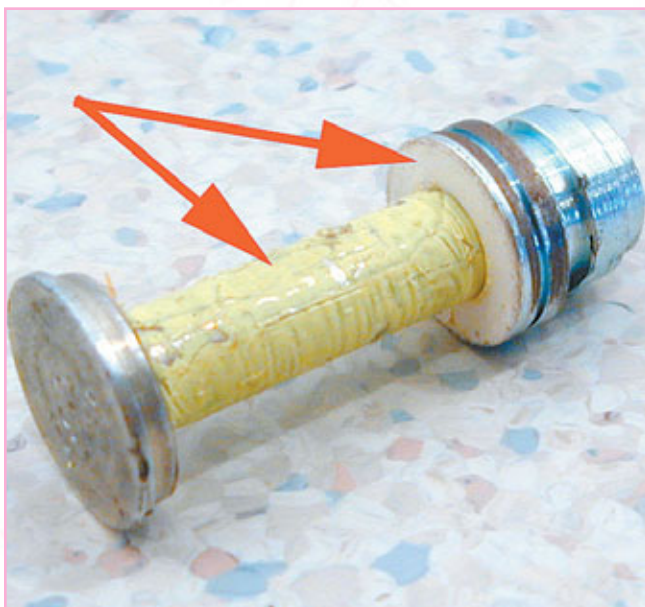
To energize (activate) a solenoid, there has to be a magnetic field. To make a magnetic field, current is passed through a coil of wire. The current passing through the coil of wire will produce a magnetic field that will establish a north and south pole in both the core and the plunger. This magnetic field, produced by the electric current is called electromagnetism. The plunger will be attracted to the core, causing it to move inward while compressing the spring (see *photograph 10*).

When the current flow is stopped, the magnetic field will collapse and the spring will force the plunger away from the core to its original position (see *photograph 11*). This will reverse any mechanical movement that was

originally established. The mechanical movement of the plunger may be used to operate other devices, but in our case it is an electrified door strike.

If you suspect that your solenoid is not working properly, the first step is to give it a good visual inspection. In the case of an electrified strike, remove it from the door frame and inspect it for dirt. A dirty plunger may drag or hang when energized, causing a slow operation or complete failure to operate. A visual inspection may also reveal a broken wire or a loose connection. A good visual inspection may save you a lot of time.

The second step is to check the voltage supplied to the solenoid using a voltmeter or a multimeter. In this example we are using an electrified strike that requires 12 Volts DC. Place one meter lead on one wire from the coil and the other



9. Under the insulating material is a layer of sticky rubber stuff.

meter lead on the other wire from the coil (see photograph 12). Now apply the voltage to the solenoid and read the meter. Here we have just under 11 Volts DC.

Now lets take a look at the voltage with the strike disconnected. In this case we have just under 12 Volts DC (see photograph 13).

As you can see, the voltage changes depending on whether the solenoid is connected or not connected. The term for this is called a voltage drop. A lot of things will effect voltage drop. In the example we had approximately 1 Volt of drop. Where did it go?

Everything that is in the circuit will eat up just a little bit of your available voltage. In this case the wire from the power supply was dropping about 1 Volt. This is normal. If the wire was several hundred feet long, it could drop the overall voltage by several volts. For every Volt dropped by the wire, that leaves one less volt available for the solenoid.

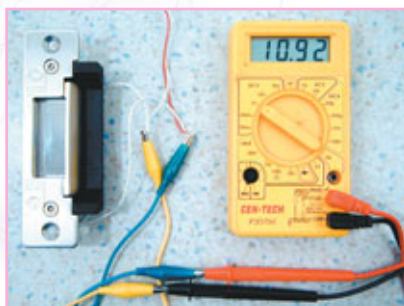
If the voltage going to the solenoid is too low, there will not be enough current flow to create a magnetic field strong enough to properly operate the solenoid. A low voltage could be caused by a bad power supply, a loose or bad electrical connection or a wire run that is too long or too small in size.

If the voltage is too high, there will be an excess of current flow through the coil of wire, which will

11. In the de-energized state, the spring pushes the plunger from the core.



10. Here the plunger is inside the core.



12. Checking the voltage when the solenoid is energized.

result in the creation of excess heat. Excess heat can cause the insulation on the coil wires to break down. This will lead to a early failure of your solenoid.

If the applied voltage looks good, the third step is to check the coil resistance with an ohmmeter or multimeter. To determine if the resistance is correct, you will need to know the resistance of a known good solenoid, just like the one you are testing. Sometimes you will find this information on the side of the solenoid, but often you will need to look for this information in the manufacturers specification sheet.

Safe Opening Volumes 1, 2, 5



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Once the normal resistance is known, the tests may begin. Check the coil by placing one meter lead on one wire from the coil and the other meter lead on the other wire from the coil (see photograph 14). Our good coil reads 46 Ohms of resistance.

If the resistance is infinite, the coil is open. With an open coil, there will be no current flow. If the resistance is less than what is specified in the specification sheet, some of the windings in the coil may be shorted together. This can happen if the solenoid has been overheated to the point that insulation has been damaged.

With some of the windings shorted, there will be a lower resistance in the coil. This will allow more current flow through the coil, which will create more heat. Don't forget that the excess heat continues to break down more of the insulation. The solenoid will either be weak, or will not work at all due to the weaker magnetic field.

I know I said earlier that current creates the magnetic field, so why does more current from a few shorted coils not make it work

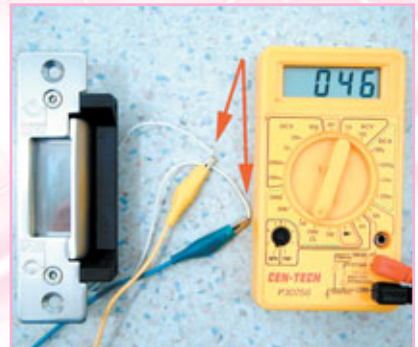


13. Checking the voltage from the power supply with the solenoid removed.

better? With some coils shorted together, the current does not flow around the core like it is supposed to. If the current doesn't flow properly, it doesn't do us any good.

If the resistance of the coil is higher than normal, it will reduce current flow and also result in a weak magnetic field.

The final step is to check to see if the coil is shorted to ground. This is also done with an ohmmeter or multimeter. With one meter lead, touch one of the wires from the solenoid. Touch the other test lead

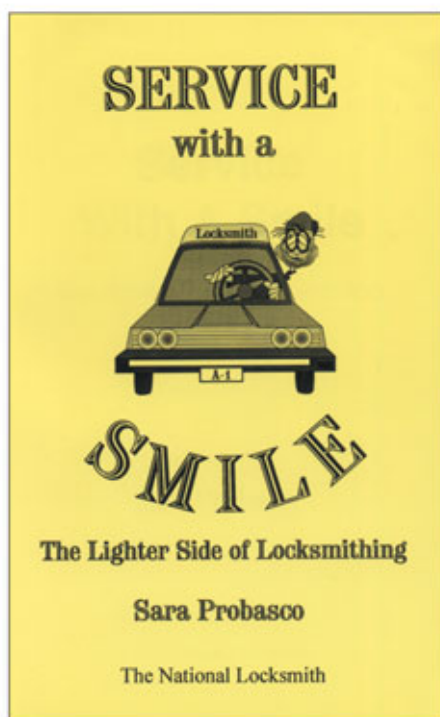


14. Testing the resistance of the coil inside the solenoid.

to the metal case of the solenoid. If there is a short, removing it may restore normal operation. If the solenoid is open, shorted or has changed in resistance, the solenoid should be replaced.

There is one other cause of failure with electrified strikes. It is not electrical, but does cause problems. Door pre-loading could be your problem.

I hope this information is useful to some of you. Electricity is here to stay in our industry. Grab it by the horns, just be sure you are wearing rubber gloves when you do! **TNL**



Service with a Smile

To tickle the funnybone of anyone in a service oriented business.

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#SWS

Beginner's Corner



By Jim Langston

Simplex Combination Lock

This month we will cover how to find the combination for a Kaba/Ilco Simplex push-button combination lock when one is lost. I will also cover how to set a new combination after the lost one is found.

Simplex locks come in a variety of models for various applications, however, the combination chamber is the same for all.



1. Kaba/Ilco Simplex L1000 series lever handled lock.

Photograph 1, shows a Kaba/Ilco Simplex L1000 series lever handled lock. This particular lock is made for a removable core. When servicing the combination chamber mechanism, you must remove the lock from the door. Next, remove the back plate cover screws. There are approximately six screws to remove. (See



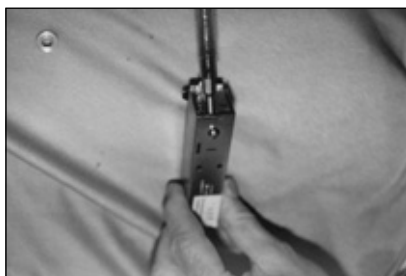
2. There are six screws to remove.

photograph 2.) Once the plate is removed, there are two more screws inside the lock that must be removed to access the combination chamber. (See photograph 3.)



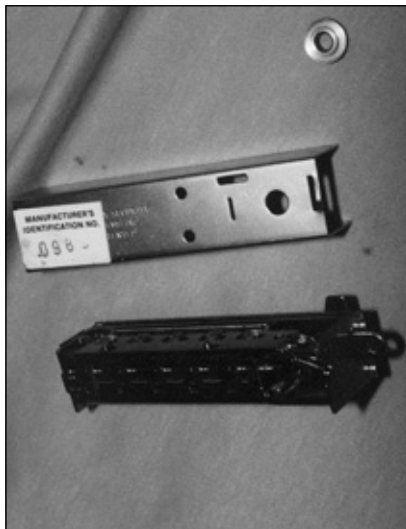
3. Two more screws on the inside.

With the last two screws removed you can now remove the combination chamber from the lock housing. (See photograph 4.)



4. Remove the combination chamber from the lock housing.

With the combination chamber removed, pry loose the staked cover from the unit (See photograph 5.)



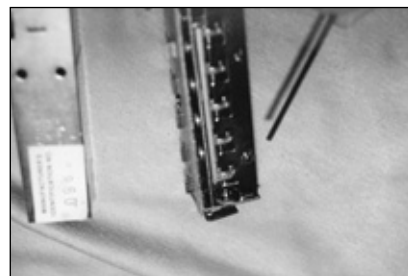
5. Pry loose the staked cover.

With the cover removed you will see five combination wheels with slots or gates. (See photograph 6.) When the proper combination has been punched in, these slots align with a locking/unlocking slide plate.



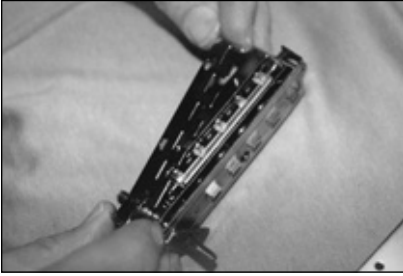
6. You will see five combination wheels.

To recover or reset a lost combination, remove the small C-clip shown in photograph 7. Be very careful not to lose this c-clip, as it is very hard to replace. Once the c-clip has been removed; you may now remove the locking slide plate. (See photograph 8.)



7. Remove the small C-clip.

With the locking slide plate removed, depress the lever at the bottom of the combination chamber. (See photograph 9.) This action will put all of the wheels in a neutral mode and you can align the gates in all the wheels so they are facing towards you. (See photograph 10.) With the wheel gates aligned you can now replace the locking slide plate so the arms are nestled in the wheel gates. (See photograph 11.)



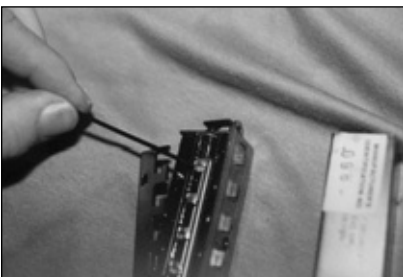
8. Remove the locking slide plate.

Once the locking slide plate is replaced, re-install the c-clip to secure and put the cover back on the combination box and re-stake. With



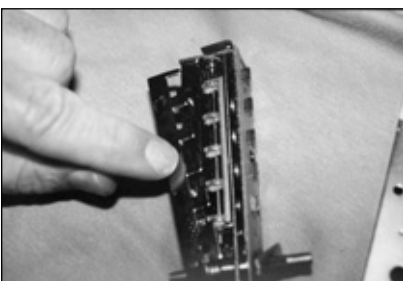
9. Depress the lever at the bottom of the combination chamber.

the combination chamber assembled, install it back in the lock housing. With the unit re-assembled, punch in the combination you want to use, remembering that each



10. Align the gates in all the wheels.

button number can only be used once. With the combination set, turn the outside knob/lever clockwise once until it stops. Hold in position



11. Replaced the locking slide plate so the arms are nestled in the wheel gates.

Sieveking Auto Key Guide



The Sieveking Auto Key Guide lists over 2,600 automotive and motorcycle keyways, covering makes from Acura to Zundapp, and listing fourteen popular key manufacturer numbers.

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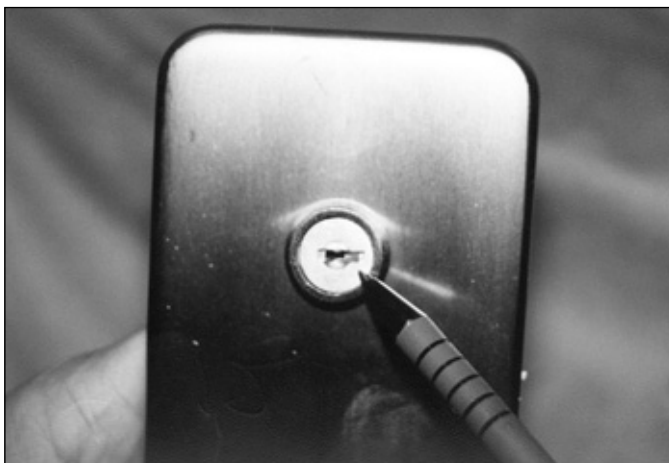
#AK - 1

and make sure the latch is retracted. Release the knob/lever. Turn the knob/lever clockwise once again to the stop position. At this point the latch should not retract unless you enter the new combination. Reenter the combination and try again and the latch should retract.

Combination Changing

On the Simplex 1000 series, the inside escutcheon is secured with a threaded lock. (See *photograph 12.*) Insert the D59 control key into the combination change plug assembly and unscrew the cylinder by turning the key counter-clockwise. Remove the combination change plug to gain access to the combination change sleeve.

Once the escutcheon plate has been removed you will see the combination change sleeve on the back of the lock. (See *photograph 13.*)



12. The inside escutcheon is secured with a threaded lock.

To change an existing combination, turn the outside knob/lever once clockwise until it stops, then release. This is to clear any buttons that may have been pressed.

Enter the existing combination. On new locks use the factory set combination of 2 & 4 simultaneously. You should feel a slight click when each button is depressed.

Insert a spanner wrench or screwdriver to engage the

combination change sleeve. Gently turn the combination change sleeve clockwise to the stop position. A slight click should be felt. Then turn the combination change sleeve counter-clockwise to the stop position.

Turn the outside knob/lever once clockwise all the way until it stops, then release.

Choose your new combination and write it down. Enter the new combination. Depress buttons carefully, a slight click should be felt as each button is depressed.

Note: You can use one button or all five for a combination, but each button can only be used once. You can also press two or more buttons simultaneously as part of the combination.



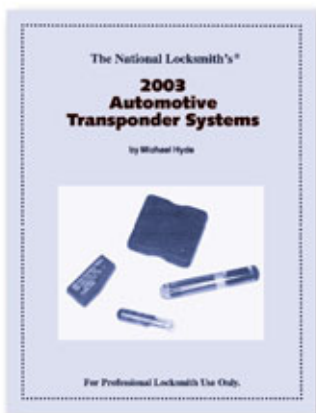
13. The combination change sleeve.

Turn the outside knob/lever clockwise once until it stops. Hold in position and make sure the latch is retracted. Release the knob/lever. Turn the knob/lever clockwise once again to the stop position. At this point the latch should not retract unless you enter the new combination. Re-enter the combination and try again and the latch should retract.

Resecure the combination change plug assembly by screwing it in clockwise with the key.

For more information on Kaba/Ilco products contact: Kaba Ilco Corp., 2941 Indiana Ave., Winston Salem, NC 27105. Phone: 800-849-8324, (336) 725-1331; Fax: (336) 725-3269; E-Mail: info@kws.kaba.com; Web: www.kaba-ilco.com. **TNL**

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#TS - 2003

The Lighter Side

Most Embarrassing Moments



by Sara Probasco

We've all experienced them—the times you wish you could crawl under something and hide, rather than admit you did it. Around here, some of these are directly related to locking ourselves out of places.

One of Don's was the day he drove fifty-five miles into the city to pick up some store inventory from the area wholesaler. Wheeling into a parking slot a few spaces down from the supplier's front door, he pulled his keys from the ignition as he prepared to exit his vehicle. Then he thought of something he didn't have on his list. Laying the keys on the seat beside him, he pulled a pen from pocket and proceeded to add the item to his list, so he wouldn't forget once he was inside.

It wasn't until he'd stepped out of his van and slammed the locked door shut that he saw the key ring, cheerfully sparkling on the front seat. Securely locked inside were all his opening tools.

Later, when he called me to say he'd be a little late getting home and explained the reason, I asked why he hadn't simply gone inside the supplier's place of business and borrowed an opening tool.

"Are you kidding?" he replied. "If I told them what I'd done, I'd never hear the end of it."

He didn't, anyhow. His secret was out.

Unknown to him, some of the guys inside the store saw what happened and were taking bets as to how he'd get in and how long it would take him. It wasn't a pretty sight, watching a veteran locksmith trying to get into his well-marked service van with a bent coat-hanger, but it did get a lot of laughs.

Recently, one of our local sheriff's deputies had a memorable moment.

With bubble-gum machine flashing in living color and siren going full blast, he screeched up behind a "perp" and bailed out of his official vehicle to make a "collar," no matter that he'd stopped slap-dab in the middle of the street. Joined by two other such vehicles, they managed to corner an important suspect in the midst of five-o'clock traffic at one of the eight traffic lights in our little town. This was a real plum for the deputy.

When the dust had settled, one of the other officers said, "Bubba, why don't you turn off the movies, over there?" He indicated the flashing, wailing marked vehicle with its motor still running.

"Oh, yeah. Sure," he replied and sprinted over to his vehicle to turn everything off.

There was just one problem. In all the excitement, he'd somehow managed to lock his doors with the keys still in the ignition. Need I say, his face was still red when Don arrived to get it open for him!

I guess one of the times I was most embarrassed was the morning I glanced out our back window, at home, to see our dog digging up the shrubbery we'd laboriously planted the previous day. Still in my nightgown, I dashed out the back door into the privacy of our fenced yard. Intent upon rescuing what was left of the shrubs, I was shouting "unpleasantries" at our canine pet, totally oblivious to the fact that the storm door had somehow managed to lock itself behind me.

This was the only door back into the house. Our back yard is totally

enclosed by a six-foot chain link fence wired with even taller cedar "pickets." Each of the four gates in that fence is secured by heavy chain and a padlock. All of these were locked. Our house is on a corner lot with a wide alley running behind the property, so only one neighbor's house is close enough that anyone might hear me shouting, and I knew they'd already left for work, by that time.

After racking my brain for a solution, I finally remembered we'd had the attic fan on the previous night and had opened one window on the back side of the house for better air circulation. Sure enough, the window was still part-way open. This was a high window, so I was forced to stack a couple of lawn chairs on top of one another to reach it. After managing to climb high enough on my wobbly, make-shift ladder to reach the window, I discovered it wouldn't budge an inch to give me more space to climb through. I looked at the small opening, and I considered my not-so-small body, then I decided I didn't have much choice, if I was going to get inside without breaking a window.

Wriggling and pushing my way through the narrow opening, I crawled through head-first onto various computer-related equipment in my home office, thankful there was nobody taking pictures, especially from behind.

I never did figure out how the storm door locked. The locking mechanism is accessible only from the inside. However, I've since found a place to conceal a key in the back yard, in case something like that should ever happen again, and I make it a practice never to go into the back yard dressed only in my nightgown, even for a minute.

One of our employees, Keith, was winner of the “most embarrassing moment of the month” at our locksmith store, recently, when a lady from out of town called to say she’d lost the keys to her Saturn. Before going out, he gave her the 800 number we had on file for Saturn and suggested she contact them and have them call us with the key codes. A few minutes later, the customer called back, saying she thought he might have given her the wrong number.

They compared numbers and found them to be the same, so Keith asked who she had reached.

“Well,” she said hesitantly, “I got a recording that said my call was a toll call and if I wanted to continue, I’d have to give my credit card number and be billed a dollar ninety-nine a minute.”

“You’re kidding!” Keith exclaimed. “Since when did the road service companies start charging for key-code information? Let me check into it, and I’ll get right back to you,” he said.

Dialing the number, sure enough, he got the same recording, only he noticed it started off with a statement the customer had failed to mention.

“If you are under eighteen years of age, this call is not legal, so hang up, now!”

Curious, Keith gave his credit card number and continued, but he quickly disconnected.

“Why didn’t you tell me that was a porno number?” he asked the customer when he called her again.

“Well,” she hesitated again, “at first, I was a little embarrassed. Then I wondered if you were pulling some kind of practical joke on me. When you gave me the number, you seemed to rattle it off so quickly, it sounded like it was pretty familiar, to you. Then, when I called it and got that recording, I wasn’t sure exactly who you’d had me call or what sort of people I was doing business with.”

Red-faced, Keith apologized profusely, explaining that we didn’t get many calls to make keys for

Saturns in Uvalde, so nobody had tried that number in a while. He made a couple of calls and got hold of Saturn, explained what had happened, and was told they’d changed their 800 number some time back. Armed with the new number, he called the customer back and they started the process again—this time successfully.

“The thing that got me was wondering if I might have given that number out before, to some timid customer who never called us back,” Keith said when telling us what had happened. “Just think the impression this woman would have had of me, if we hadn’t gotten things straightened out!”

“Oh well,” Don said, grinning. “Look at it this way: maybe you’ve finally found your calling.”

“Oh? How do you figure that?” Keith asked, puzzled.

“You know what they say, ‘Everybody’s got some purpose in life, even if it’s just to set a bad example.’” **TNL**



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Diebold TL-30



By
Dale W. Libby, CMS

This is a story of two safes. More properly, a cash box and a Diebold Tri-Bolt lug door TL-30 unit. A long time ago, Little Tommy and I bought a bunch of locked safe equipment in a closed sale. One of the larger items was a Diebold TL-30 three-bolt lug door unit. These units come in either medium, large, or very large sizes. This was a medium large size.

The opening was simplicity itself. We drilled a hole in the top of the safe and went for the change keyhole with a long 17-inch Hawkeye borescope. Twenty minutes later, we were in the money chest. The diabolical lock used on these rated money chests was the flip-flapper 180-88 Diebold tri-bolt combination lock. I am not going to discuss the workings of this monster lock. I did the opening on this unit several years ago and touched on the servicing of this complicated and expensive combination lock.

The dial and ring alone for this unit costs in excess of \$200.00 if you could find a place to buy one. I do not think that a new lock is even available from Diebold for any price. Tom and I were set the daunting task of repairing or retrofitting a new lock to bring this formidable chest back into the area of working and protecting money.

When this unit was new, it had three bolts and a manipulation resistant lock. Each bolt was separately protected by spring-loaded relock triggers. The relock

triggers are held in place by screw pods on the back cover of the lock mechanism. When the dial was punched, this would break the back cover pods and all three relock triggers would spring into action, and all three bolts would be relocked. A very malevolent opening (when the relockers are set off) to say the least, not to mention the nasty hardplate that one does encounter.



1. Reliance safe welded to Diebold TR-30 lug door safe.

After opening the chest by dialing and scooping, we sold the unit to a bowling alley that handled a lot of cash. The unit was perfect. When we moved the heavy round door lug chest into the basement, it was an easy move. It resided in a corner of a very large, spacious, empty room. There was even a ramp we used to bring the unit to the basement.

The TL-30 rating on the unit is a burglary rating stating that the unit will withstand 30 minutes of tool resistance. If it were labeled a TRTL-30, that means that in addition to drills and grinders, the unit would also be

protected from a cutting torch for 30 minutes as well. This is accomplished by adding a thick layer of copper plate to the thickness of the door to confound an oxy-acetylene cutting attack. The copper has no defense against drilling, however.

After many years of no problem service, with the door slamming and speed dialing, the safe lock mechanism broke and two of the three relockers broke free from their restraints on the back cover of the lock apparatus. The good news was that the safe door was open when this happened. Tom went to check it out and decided that the patient was dead, beyond tri-bolt repair. In the meantime, the customer had built a warren of new offices, hallways, wine racks, and right-angled turns in the formerly empty room.

Tom removed all the bolts and the broken lock mechanism. He told the customer that the door could not be repaired back to factory standards for the parts were not available. Also, without a major remodeling and removing of doors, walls, and other construction, the dead lug door chest could not be isolated or removed from the premises. Instead, Tom sold him the safe shown in *photograph 1*.

This is a small depository unit with three bolts locking the active side of the door. Granted, this is not a TL-30 unit, but it does keep the employees honest. The unit was then welded to the Diebold unit to keep it from walking away.

Continued on page 80

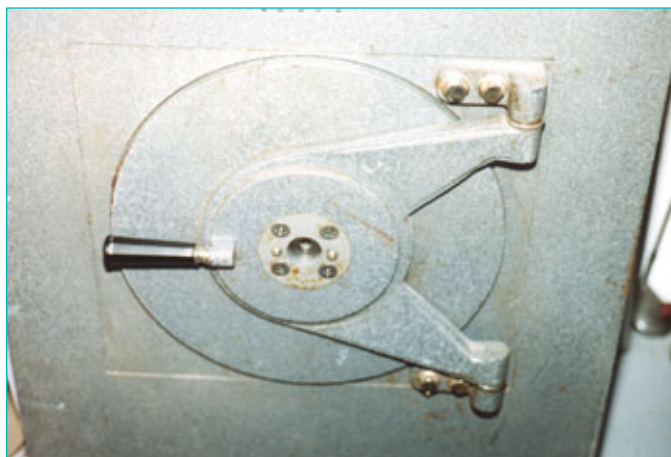
Continued from page 78

Photograph 2, shows the three locking bolts along with some of the wine bottles that we had to contend with while working on the lower unit.



2. Inside of reliance box showing the three locking bolts.

The problem was that the bowling alley was growing and a large restaurant was added and the manager wanted more protection (thicker walls and doors) and more storage capacity than the smaller upper safe unit afforded. He beseeched Tom and I to come up



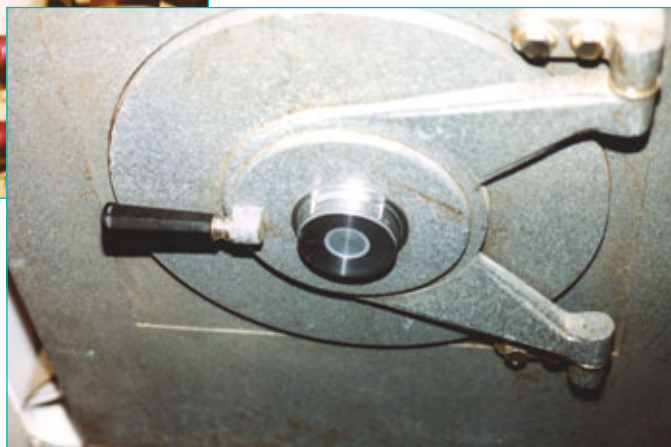
4. Dial and ring removed prior to retrofit. Hole under dial was filled with large washers.

with a 'fix' for the bottom unit. We thought about it and decided to take off mechanical lock and mount a new S&G 6730 lock and use only one bolt to secure the mechanism.

Logically we concluded that, a Mosler Round Door Lug Chest (TL-30, or TRTL-30) was only secured by a single round bolt. Granted, it was sometimes impossible to determine if the bolt came out at 3:00 or 9:00 o'clock, but there was only one active bolt.

Yes, we knew that we would have to remove the labels when we retrofitted the unit, but the manager did not mind, as long as the unit locked and the combination worked. The repair did work out well and

the unit worked sweetly. The customer was quite impressed and happy when five hours later we presented him with a



3. Classic Diebold TL-30 with 180-55 double flapper lock mechanism.

working lug door unit and a very hefty bill.

Let us go over the actual retrofit and discuss some of

Photograph 3, gives you an idea what we were up against. This is the typical configuration of the Diebold TL-30 tri-bolt lug door. These doors come in different sizes. The only difference with the larger doors is that the length of the locking bolts is longer. The dial and lock mechanism is identical and located in the center of the door. Since these parts were missing on this retrofit, I did not take any pictures of them. The dial is spy proof and hard to read at the best of times.

With the old dial removed, we can see the four large Phillips screws that

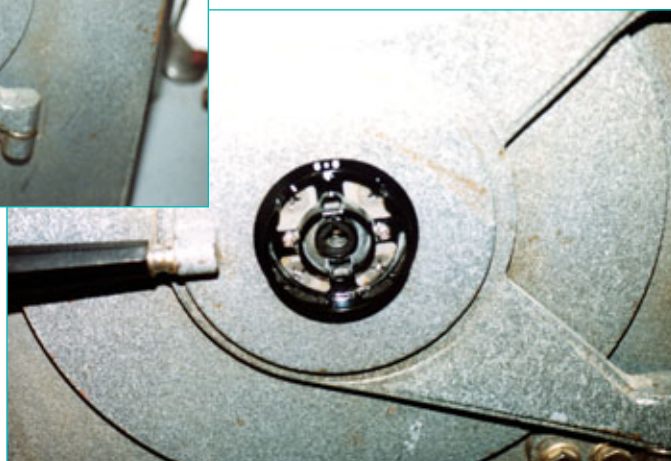
attach the crane mechanism to the door proper. (See *photograph 4.*) Also note the large hole beneath the removed dial ring. This hole must be filled with large washers to the surface of the door.

We found out about this after mounting the ring without the washers. The

new S&G dial has a plastic insert in it to hold the spindle in the center of the dial ring. Without the washers behind it, the plastic insert will fall out and the dial will rub on the edge of the dial ring. We used 4-1/2" washers, and use a 5/16" fender washer to bring the stack in line with

the face of the door. This kept the plastic insert perfectly in place. (See *photograph 5.*)

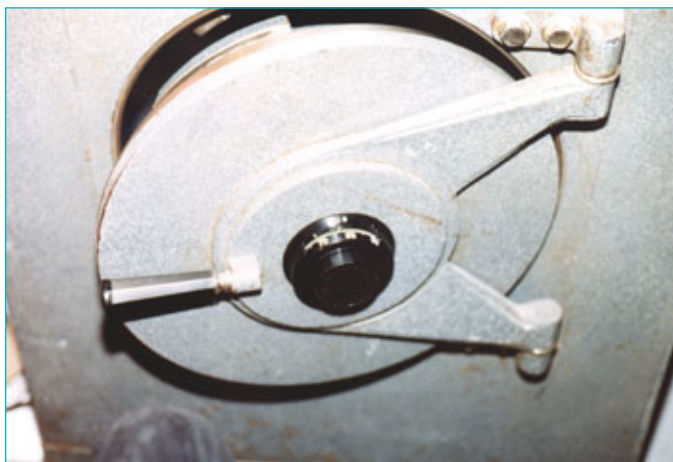
The holes for mounting the old Diebold dial ring are at 3:00 and 9:00 o'clock. They did not match up with the holes on the S&G dial ring. Instead of drilling and tapping holes in



5. New dial ring attached to front door.

the problems we had to overcome. The next time I will weld on a mounting plate for the S&G lock. It would have made the work easier. We did it without a welder and this is what happened.

the Diebold door for the S&G dial ring, we did a 'dial ring back off.' We put both dial rings back to back and aligned them perfectly. I then marked the Diebold mounting holes on the back of the S&G dial ring.



6. Finished installation with S&G dial and ring.

Then we drilled the holes to the proper size and it mounted to the door perfectly, the first time.

When it was all done, the dial and ring worked perfectly. We used a regular dial spindle and had to cut off about 1". At first we were not sure that the spindle would be long enough (in the planning stages) but we were relieved to see that the spindle was a little too long on the job site. (See photograph 6.)

So far, the job was not too difficult, and we did not encounter any problems that caused us to lose time. Placing and mounting the lock

where to mount the lock. The lock outline is made in a black marker.

The only things we had to do now was to install a longer bolt in the S&G combination lock, attach the lock to the inner bolt door, and shorten up the round bolt attached to the S&G lock.

took the most time. We decided to mount the lock facing about 10:00 o'clock (with the door closed). From the inside of the door, as seen in photograph 7, it appears to be at 2 o'clock. Tom is holding the original bolt in position so we could decide

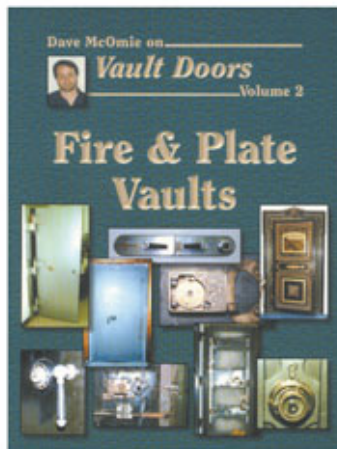
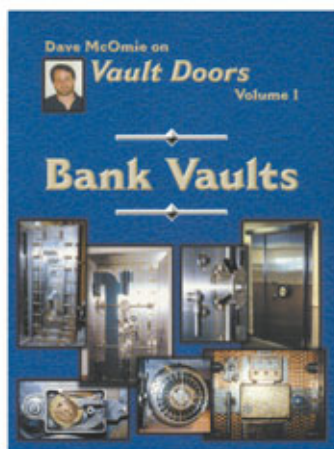
These three items took the most time, for everything had to align perfectly, to work perfectly. We installed the 5" extension lockbolt to the S&G combination lock and then we had to shorten the bolt by 2". If this were a larger door, then we would not have had to shorten the brass bolt.

The next operation was to mark, drill and tap the $\frac{1}{4}$ " bolt holes to attach the lock to the door. The two bolt holes next to the lock bolt went



7. Blue printing the position of the new lock and bolt configuration.

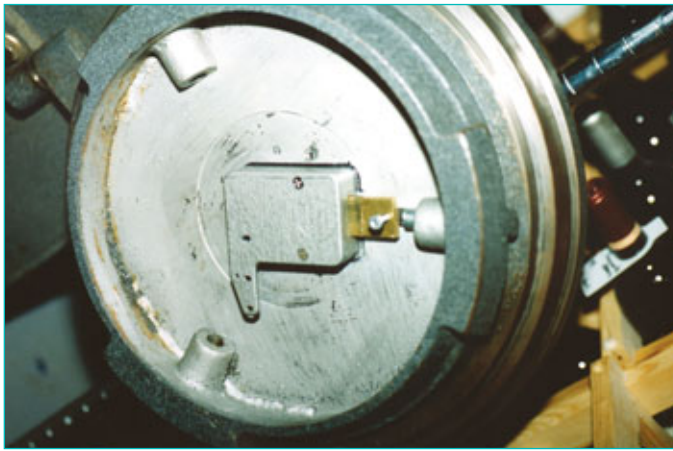
Dave McOmie on Vault Doors Vol. 1 & 2



These openings can be a nightmare, but not when you bring Dave McOmie along with you on the job.

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8. Lock and bolt installed and held together with 8/32-inch carriage bolt.

easy. There was only soft steel, which drilled and tapped easily. The other two holes closest to the spindle hole in the door were protected by a rust-red layer of hardplate just under the skin of the door. There was not enough metal on top of the hardplate to tap more than one thread.

We solved the problem by drilling through the hardplate with a 1/4" drill until we came to softer steel. We then drilled with a 3/16" drill and tapped this hardplate-protected steel to 1/4" x 20 tap. We used longer mounting screws for these holes. In all, this took us over an hour to accomplish. When we were done, the lock was solidly mounted to the door. Whew!

The next part of the job included cutting the active door bolt shorter, mounting the bolt to the combination lock bolt, and slightly thinning the combination lock bolt to aid in alignment with the center of the locking bolt. We secured the bolts with an 8/32" threaded carriage bolt. We put the flat part of the carriage bolt on the bottom and it worked perfectly. It did not even rub the face of the door when it moved. We then threaded two nuts on this screw to keep it in place.

In *photograph 8*, we can see the almost completed installation. We just have to thread the two bolts on the screw. The throw of the lockbolt was the same as in the original configuration and the same length of the 6730 S&G combination lock. In *photograph 8*, the bolt is thrown, and in *photograph 9*, we see the edge of the bolt behind a lug on the door.

The reason we choose to mount the lock in the 'up' position was that in case of failure, we would have gravity to help us get the lock open.

If the bolts ever became disconnected, then by hitting the door with the lock open, the bolt will fall into the open position. If we had mounted the lock facing down, and it became disconnected, it would act like a relocker and we would have to search and find the bolt and then raise it up.

made Tom, the customer, and me very happy with the outcome of the retrofit. If you ever came up to a Diebold tri-bolt lug door like this with an S&G dial and ring on it, where would you drill? You certainly would not be using a mini-rig on this unit trying for the drop in position. This would be a drill and transfer opening at best, or with the new methods, you could drill and read the combination through the change key hole.

Drill, retrofit, and prosper. **TL**



9. Edge view of the door and the single locking bolt.

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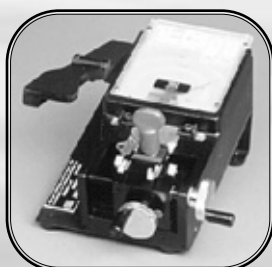
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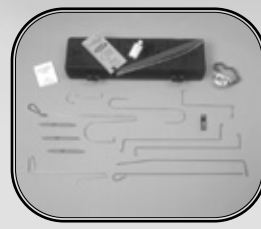
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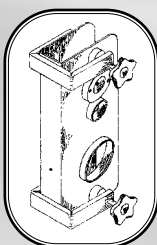
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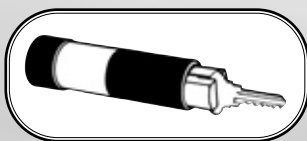
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**JET KEY BLANKS
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Follower Tip**

I like to make my own followers, and it's easy to find the material to make them with. I go to my local hardware store, or hardware superstore, and purchase an aluminum rod the same thickness as the standard followers. These aluminum rods are about 3' in length and are usually very inexpensive. The length of these rods allows me to cut my followers to any desired length.

To make a hollowed out end for Arrow, Sargent or similar cylinders, I drill a small hole right in the center of the rod to the necessary depth and then increase the drill bit size until I get close to the size I need. To finish off the opening, I use a round file to open the hole until the Arrow and Arrow style plugs will slide into the follower easily. I also file the opposite end to accommodate mortise cylinders.

To modify this follower to allow for the dumping of master pins, I use a file to cut a ramp on one side of the follower that flattens out to a "table".

The best part about making my own followers is that I can make them as long, or as short, as I wish and can customize them for any particular special need that I might encounter.

*Doug Greenberg
Pennsylvania*



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Lock Picking Tool Case**

I found a cool, neat, and discreet way to carry around my favorite lock picking tools, keep them all together and always with me.

I scrounged up one of my old eye glass cases that have been gathering dust around the house (or you can pick one up at a junk store or at the flea market), and put it to use.

I put a rake, double ball, a pick, and small diamond and a couple of turning tools (whatever your favorites are) into the case, put the case in my shirt pocket and I'm ready and on my way. If push comes to shove, I can always slide a pair of glasses into the case if necessary.

*Bill Paroby
New Jersey*

A Few Words From Jake...



**by Jake
Jakubowski**

Here it is August already and summer's running out faster than iced lemonade at a church picnic!

Let's see, in June I did a Tips, Tricks and Stuff seminar for the Northern New Jersey Locksmith Association. In July, I went to the DHI show at the Old Navy Pier in Chicago. Then ten days later, I did ALOA. In between, Christie and I squeezed some vacation time in and did a little visiting with friends.

On the 17th of this month, I'm going to be doing another Tips, Tricks and Stuff seminar at the Ramada Inn, in Eau Claire, Wisconsin. The Wisconsin Indianhead Chapter of ALOA is sponsoring it. The seminar will be from 10AM to 3PM with a break for lunch.

I'll be giving away my nearly famous grab bag of goodies and several door prizes from various sponsors and prize contributors.

If you'd like to attend give John Dorsey a call and get the details from him. You can contact John at 888-856-9684, or email him at johtlok@safenlock.com.

I have been reading a book (*Selling the Invisible*) by Harry Beckwith. One of the things the author pointed out is that most of the successful companies in business today focus, almost to the point of fixation, on the one thing they did well. For instance:

Dominos Pizza focused on 30-minute delivery. Not price, not quality but speed of service. Little Caesar's pizza focused on two-for-one. Remember their "Pizza, Pizza" ads? Carrying that thought to our individual businesses, how many of you "focus" on those things you do best. It doesn't matter what that "thing" is. Do you focus—almost to the point of fixation—on what you do best?

If not, maybe that's why your not enjoying the success you feel should be yours.

Maybe your focus is not narrow enough. Maybe your concentration is not centered. You have too many outside, mundane or immaterial "things" your dealing with other than those you should be focusing on.

Because you are a service-oriented business, maybe you should focus more strongly on offering the best, the fastest and the most professional service your capable of. Each of us can be an expert in something. Why not make that something, the something you focus on to become the successes you want to become!

See y'all next month.



**STRATTEC WINNER:
Safe Repair and
Reference Tip**

When repairing the hole after a safe penetration, instead of a ball bearing, I put in a carbide insert.

These are circular or triangular shaped inserts used to index tool bits for machining on a lathe. These inserts are solid carbide. Worn ones can be gotten free from nearly any production machining company. New ones can be bought from machine/tooling companies at a surprisingly low price.

These inserts are much harder than a ball bearing! They come in various shapes and sizes, which

allows them to fit a variety of holes. The circular inserts will rotate when drilled. I find these inserts to be much more effective than ball bearings when it comes to filling a drilled hole on a safe.

I save safe locks from opening jobs to create a hands-on reference library for figuring out drill points or malfunctions. They don't take up much space and provide an accurate visual reference that is easier to diagnose lock problems with, than drawings, or pictures of locks. An added benefit is that if I need a drill point, all I have to do is measure the drill point on a lock that I've already worked on. Works for me.

*Jack Tom
New Jersey*



**HPC WINNER:
Sentry Model S-3807 Opening Tip**

The Sentry safe (S-3807) that I was called to open had a keypad malfunction and would not respond to any input.

Sentry tech support suggested the safe be drilled and furnished me with the drill point for drilling the solenoid. That opening would also require cutting out the key lock and drilling another hole for the anti-locking device. I had the operating key for the key lock, but Sentry tech support insisted that the lock still had to be removed using their opening procedure.

What I found out was that it is not necessary to do any drilling until after having tried the following test to release the solenoid:

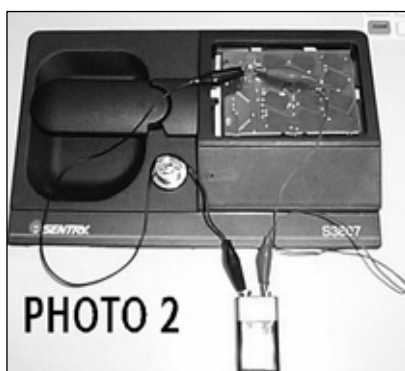
1. Remove the plastic cover from the keypad and remove the number pad. (See photograph 1a.)
2. Unlock the push-in lock.
3. Connect two wires to a nine-volt battery with alligator clips (see photograph 1b) and make contact to solder joint "A" with the positive connection and "B" with the negative



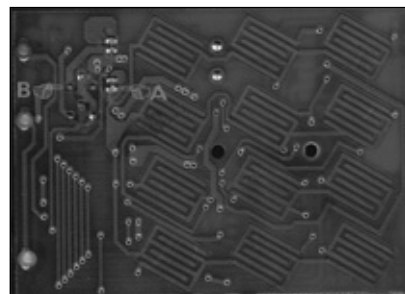
Photograph 1a.

connection. (See photograph 1c.) At this point, I heard the solenoid release.

The tricky part is to pull the safe handle down while maintaining the Alligator clip contact with points "A" and "B".



Photograph 1b.



Photograph 1c.

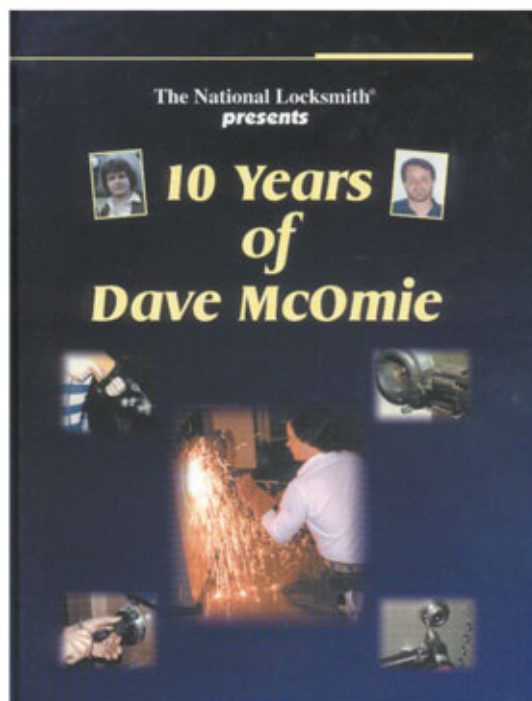
This procedure should open the safe. Then whatever repairs are needed can be made.

*John A. Nassour, CRL
Missouri*



**SARGENT &
GREENLEAF
WINNER:
Ford Focus Ignition
Removal Tip**

Not having a drill bit to go through the hardened metal of the Ford Focus ignition, I decided to see if I could remove the transponder antenna, and then use my RotoZip with a metal blade and cut the top of the ignition off. There is one #20 Torx screw holding the antenna in place. I removed the screw and set the antenna in a safe place.



10 Years of Dave McOmie

Every single National Locksmith article by Dave McOmie from August 1986 through August 1996 under one cover!

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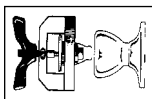


Next I cut the top 1/4 off of the ignition and had only a very small piece of the hardened metal left on the ignition. I pulled it out and used a drill to drill into the switch and removed all of the wafers in a matter of a few minutes.

After drilling out the wafers, I was able to turn the ignition switch and depress the retainer, which allowed me to remove the switch and then install a new unit.

*Wayne Gow
 North Carolina*

Editor's Note: *Wayne, good tip. But there is an easier way now. I gave a seminar to the Northern New Jersey Locksmith's Association, and Frank Markisello with AABLE Locksmiths, showed me his prototype tool for quickly and easily removing the Ford Focus Ignition. By the time you guys and gals read this, Frank should have that tool on the market. Contact him at: (718) 847-1377; Fax: (718) 847-0991.*



**A-1 SECURITY
 PRODUCTS
 WINNER:
 Door Header Drill
 Press Idea**

Drilling into the bottom of a header to create pilot holes, or holes that I would have to tap when mounting closers, became a chore for me. I decided to find an easier way to accomplish this task before I burned out on the idea of installing the closer.

Photograph 2a, shows a vertical drill press I made specifically to make drilling the underside of headers simpler, easier and more accurate. The costs were minimal as I picked up a small used drill press at the local swap meet for about \$15.00. The pipe I needed can be found



Photograph 2a.

almost anywhere (I replaced the pipe that came with the press with a 7' length of galvanized pipe to give me the height I needed).

If you have ever drilled reinforced steel headers you will appreciate this tool. No pushing up on the drill with the top of your head. No standing on a ladder and using your shoulder to get leverage. No standing under the drill with metal chips and concrete dust falling down your shirt. (See *photograph 2b*.)



Photograph 2b.

To make this rig, I kept the old base, inserted the longer pipe and attached the press part upside down at the upper end of the pipe. I am going to modify this rig by removing the base and putting one of those rubber cups on the bottom end of the pipe for better stability. Taller doors would of course need a longer pipe.

Believe me, this rig takes the hassle out of drilling holes in the underside of the header.

*Mark Rankin
 E-mail*



**ILCO KEY BLANKS
 WINNER:
 E-Z Reader
 Storage Tip**

I have had great success using EZ readers for decoding automotive locks. However, I have had trouble keeping up with the decoder slide gauge once the paper envelopes they come in begin to wear out. After having to dig through a toolbox to find my Ford 8-cut slide, I decided to come up with a better way to store the decoders.

I found that a business card file/wallet works great to hold the decoder and slide. (See *photograph 3*.)

The tools fit perfectly inside the business card slots and when the wallet is closed everything is held securely in place. The wallet fits nicely inside my toolbox for special



Photograph 3.

tools and provides a professional appearance to my decoding tools. It fits into an inner coat pocket easily too.

*Bobby Floyd
 Arkansas*



**KEEDEKX WINNER:
 Deadbolt Drill Rig Tip**

I have developed a jig to drill out the screws of a defective deadbolt. I made the jig from spare parts that I had laying around my shop.

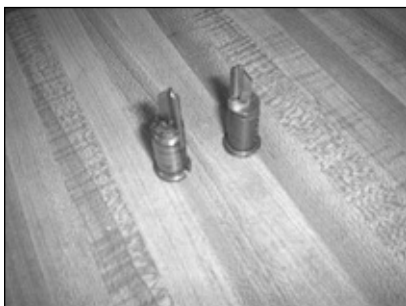
I used an old Schlage deadbolt housing (you can use whatever brand, or brands are most popular in your area) and drilled the mounting holes all the way through the face from the back of the housing. (See *photograph 4a*.) I used an 1/8" drill bit so that I could drive 5/32 roll pins into the holes. These roll pins act as inserts to keep from wallowing out the soft metal in the housing when using the jig.



Photograph 4a.

Then I removed the plug and dumped the pins and cap retainer. Next take the blanks that are most popular in your area and cut off the bows. Then epoxy the key to the end of the plugs, with an inch or so sticking out of the end of the plug. (See *photograph 4b*.)

To use the jig, insert the proper plug into the shell, and lock into place with a couple of long top pins. Insert the plug into the housing, then slide the key blank into the defective deadbolt and drill, using a



Photograph 4b.

$\frac{3}{32}$ bit, with the roll pins acting as hardened drill guides. (See photograph 4c.)



Photograph 4c.

*Rod Springfield
Texas*



**TECH TRAIN
TRAINING VIDEO
WINNER:**

**Trunk Emblems
and Strike Plates**

If you have to remove a trunk emblem to service the lock and don't want to buy a new special pop rivet gun to put the trunk emblems back on; all you have to do is make a spacer bushing and use a regular pop rivet gun.

Make the bushing out of $\frac{1}{4}$ " thick stock (I used aluminum) $\frac{1}{4}$ " long and drill a .130" hole through it. When you need to use it, all you have to do is slide the spacer on the backside (over the shaft of the rivet and against the head of the rivet gun) of the rivet and then put the rivet into the rivet gun. It acts as an extension so the rivet will go all the way into the recess of the emblem.

If you've ever had trouble locating a strike plate where someone else has messed it up, and you have to correct the alignment, here's an easy way to do it. Put double stick tape on the backside of the plate and press it onto the doorframe. Check to make sure the deadlatch or deadbolt is not binding.

Just pull the strike off and move it until it is where you want it and mark

the frame for the new location. Re-chisel the doorframe if necessary and attach the strike with the proper screws.

The tape will allow you to keep moving the plate and hold it on the frame till you get it exactly where you need it, and you don't have to put any extra screw holes to hold it or go crazy with it moving on you.

*Terry Bradshaw
Florida*



**SIEVEKING
PRODUCTS GM E-Z
WHEEL PULLER
WINNER:
Key blank Tension
Wrench**

My most often used method of picking locks is raking. A problem I have is that I rake the tension wrench out of the plug and onto the ground into some dark crevice while a customer is watching.

I needed a better wrench, so I modified a couple of key blanks as shown. The KW1 fits the majority of the locks that I pick (Kwikset, Yale, Design House, etc.) and a SC-1 for Schlage and whatever else it might fit. (See illustration A.)

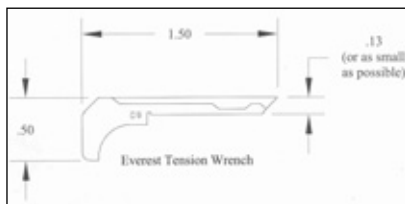


Illustration A.

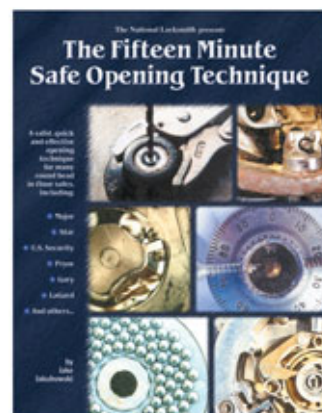
The first couple of keys broke while bending them, so I used the flame from a lighter to heat them up before bending.

Next, file enough of the blade so that it does not interfere with the pick and make sure that the top part of the wrench is short enough that it doesn't touch the first pin in the lock. Also, on this top protrusion, I put a bevel on the bottom side so that the pick doesn't catch on it.

Since the wrench goes into the lock as far as it does, I never drop them anymore, and as a bonus, the wrench puts equal pressure on the top and bottom of the plug, making it much easier to pick.

The way I use the wrench is to grab hold of the knob that I need to open with my left hand, and with this tool in the lock, I use my thumb to

15 Minute Safe Opening



This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

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put pressure on the wrench to turn down in a counter-clockwise direction or middle finger to turn up in a clockwise direction.

Jeff Jensen
South Dakota

Major MAJOR
MANUFACTURING, INC. PRODUCTS
WINNER:

Lock "Compression" Sleeve Tip

We make our own compression sleeves out of 2" PVC pipe, which has an outside diameter 2-1/8". These rings are used to reinforce the lock area of the door and keep the skin of the door from collapsing when the lockset is tightened.

We precut about 10 of them at a time to about 1-5/8" long for 1-3/4" doors, and 10 of them at a time to about 1-1/4" long for 1-3/8" doors.

We simply prep the door as usual for both the cross bore and edge bore holes. Insert the PVC through the 2-1/8" hole. Put the lock together as normal and tighten the screws snug so that the door will "shrink" in, just a little to where the PVC

compression ring and the outside skin of the door are flush.

Then we use a 1" hole saw and insert it into the latch hole you have already bored into the door and drill through the PVC ring. Remove the lock, install the bolt or latch through the PVC compression ring and then reinstall the lock and tighten as tight as possible.

Shon A Andrews
E-mail

Editor's Note: *Shon, interesting idea and it appears that it will work very well. However, I thought that rather than install the lock, and drill the edge bore hole in the compression ring, and then take the lock off and install the latch, why not simply measure for the center of the width of the compression ring. After marking the centerline on each compression ring, cut your edge bore hole before you place the compression ring in the door. Then all you have to do is turn the hole in the compression ring to align with the edge bore in the door. Anyway, your idea is a good way to strengthen the lock area and keep the door from collapsing.*



SLIDELOCK Z TOOL
STARTER SET WINNER:
Find 'Em Faster Tip

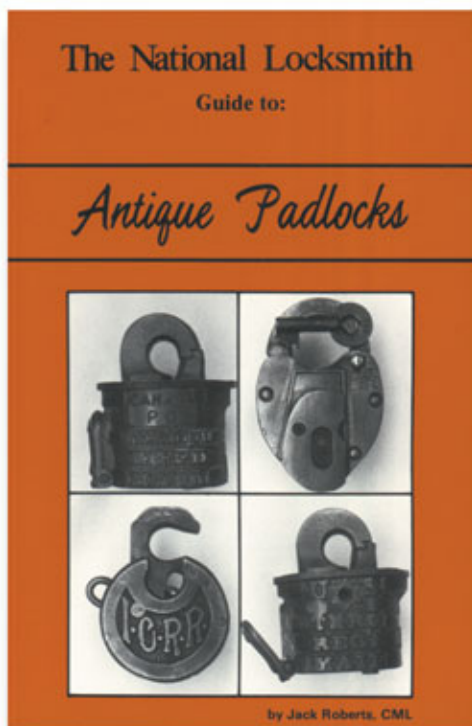
Keeping track of time-movement winding keys for one of my vault customers has been an on-going issue. Employees would misplace it or not put it back in the same place each time they used it. That created problems for the customer and earned me some irate phone calls.

I utilized an extra large, magnetic Hide-A-Key box and put a change key and a wind key in it. I placed it just inside the vault on the side of the jamb. It is close enough at hand that even a less than conscientious employee doesn't have to go very far to put it back.

This also gives me access to a change key so that whenever I go out to change their combo, the correct change key is always handy. We also placed our company sticker on the cover for any problems that may happen. They have never called back for a new wind key since.

James Botek
Oregon

TRL



Antique Padlocks

Finally there is a book to give you all the information you need about old interesting locks.

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#PAD - 1

2000 Kawasaki Concours

Part 1

by
John Blankenship



1. The Concours is an economically priced 1000cc sport-touring motorcycle that has a large following. The luggage comes as standard equipment. There are a total of thirteen locks on this motorcycle.



2. This view from the drivers seat shows four of the thirteen locks. The ignition/steering lock is top/center, the gas cap lock is bottom/center, and the two glove box locks are on the left and right under the handlebars. These four locks, (the seat lock, and the two helmet locks) use the same key while the six locks on the luggage use a different key.

Glove Box Lock



3. Either of the two glove box locks offers the easiest and quickest way to originate an ignition key.



4. Pick the glove box lock 90 degrees clockwise to unlock it. This lock picked easily with a rake and lubing helps if it is being stubborn.



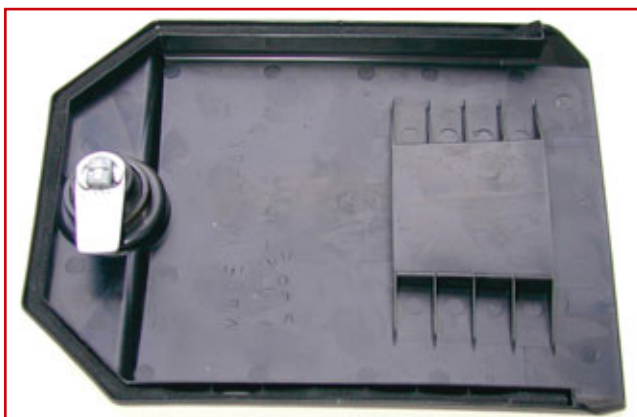
5. The lock has been picked and now the lid can be raised.



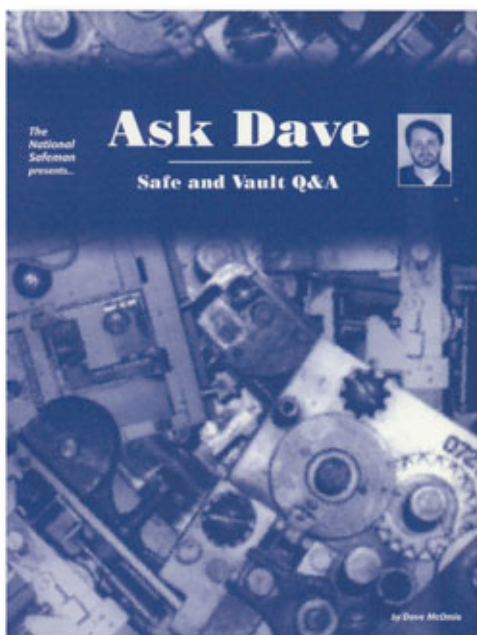
6. Underneath the glove box lid are two plastic hooks that secure the hinge to the lid. Squeeze them together with your fingers and the lid can be pulled off.



7. The glove box lid is free from the hinge unit and can now be taken to a workbench.



8. The underside of the glove box lid is shown. There is a code on the tailpiece.

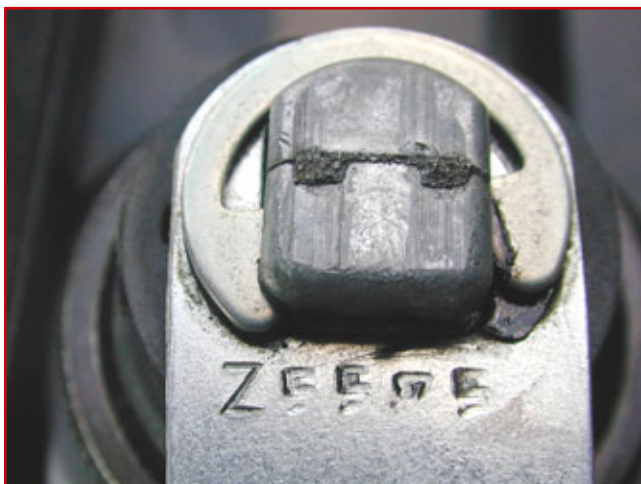


Ask Dave

You asked. He answered.
This is safe and vault Q&A
with an attitude.

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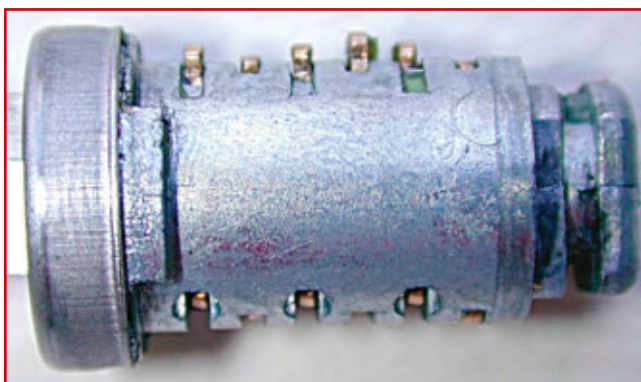




9. The code is very poorly stamped into the tailpiece. I read the code as Z5575. It is not a problem if you cannot read the code as you can disassemble the lock for all six cuts about as fast as you can look up the code. Remove the C-clip from the back of the plug and push the plug out the front of the cylinder. Be careful and don't allow any wafers to fall out.



10. The plug has been removed along with the tailpiece and C-clip.

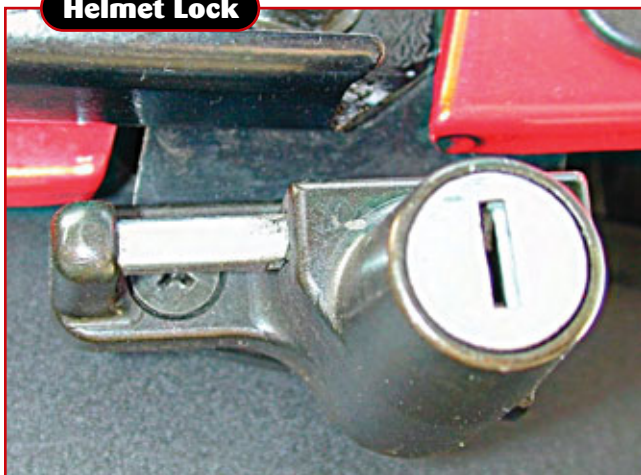


11. The glove box plug contains all six wafer tumblers. An X103 blank inserted into the plug shows the cuts are 323431. A reverse search revealed that the code is Z5575.

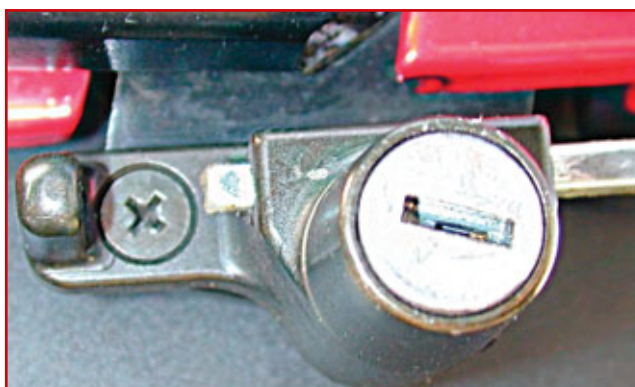


12. The original Kawasaki key is in the center. The code cut X103 on the right works all of the locks on the motorcycle except for the luggage. I thought the code cut X266 on the left would work, but it would only work the gas cap lock. The reason is the raised land next to the groove and above the shoulder; it is circled in the photo. It prevented the key from fully entering the shoulder-stopped keyways although it would enter the tip-stopped gas cap lock far enough to work. This could cause some confusion and frustration if you were using this blank to make a key for a motorcycle with these style locks. I removed the land with a Dremel and it then worked fine.

Helmet Lock



13. The helmet locks are another good way to originate a key for this bike. There are two of them and they are located on both sides of the motorcycle below the rear fender and just in front of the rear turn signals. The luggage obstructs access to them so it must be removed from the bike. This is easy to do if you have a luggage key or if the luggage is unlocked; more on this later.



14. The lock has been picked a little over 90 degrees clockwise and the locking bolt is retracted. This lock picked easily with a rake. You can now remove the one Phillips screw that secures the lock to the frame and take it to a workbench.

Continued on page 108

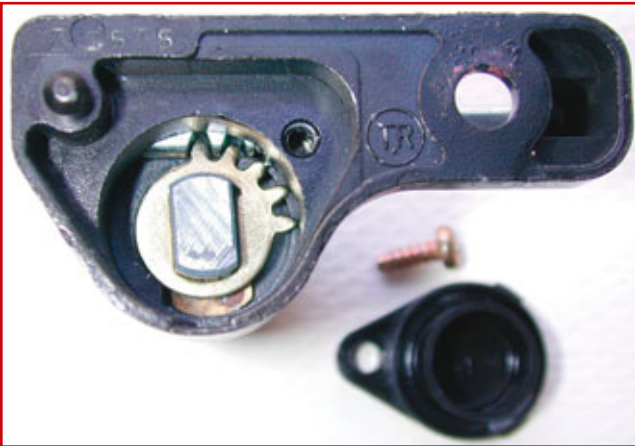
Continued from page 106



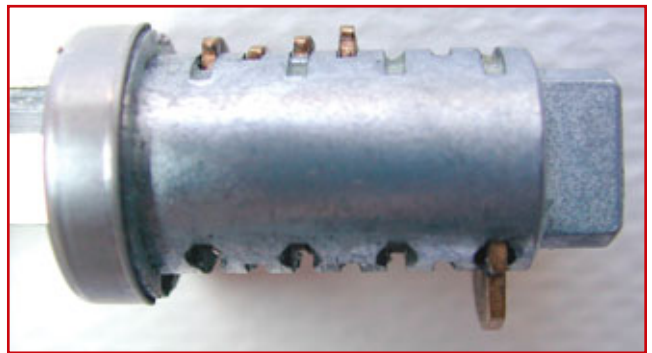
15. The code is stamped into the back of the helmet lock near the upper/left corner.



16. The code, Z575, is well stamped and easy to read.



17. If you need to disassemble the helmet lock, remove one Phillips screw and remove the plastic cover. The retaining wafer is visible on the bottom side of the plug. Depress it and push the plug out the front of the lock while being careful not to dump any wafers. The tailpiece is a pinion gear that engages a rack on the locking bolt. I left it in place although it is easy to remove and replace.



18. The helmet lock plug contains wafer tumblers in spaces 1-4 plus the retainer. An X103 blank inserted into the plug shows the cuts are 3234. A search using code software revealed that there are only six codes that use those cuts in the first four spaces. You can progression the last two spaces in any of the other locks except for the luggage, which uses a different key.

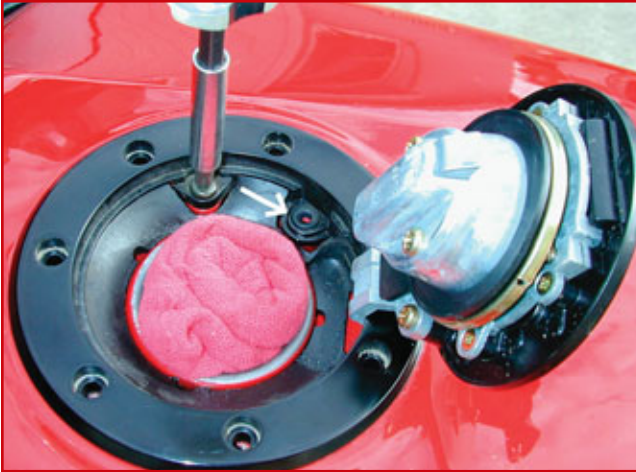
19. There is no code on the gas cap lock but it is a good source for the cuts is spaces 2-6. It is a good lock to read because the flip-up dust cover allows an unobstructed view into the keyway. To disassemble, pick the gas cap lock 90 degrees clockwise to open it. You are picking against spring pressure so have a small screwdriver ready to finish turning it. This lock was easy to pick using a rake and the spring pressure has turned the plug back partway. Use a 4mm hex key to remove all seven bolts securing the mounting ring.

Gas Cap Lock

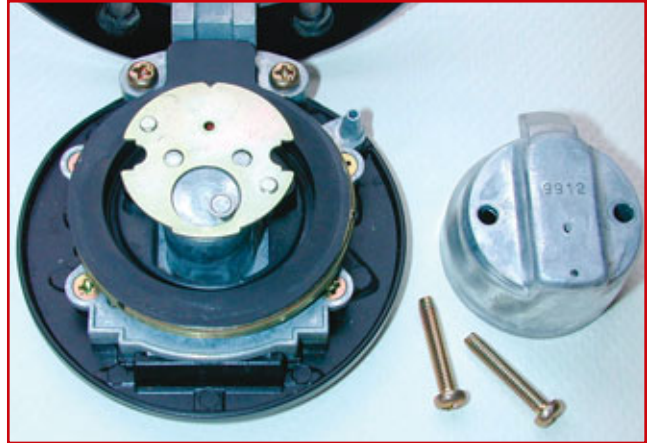


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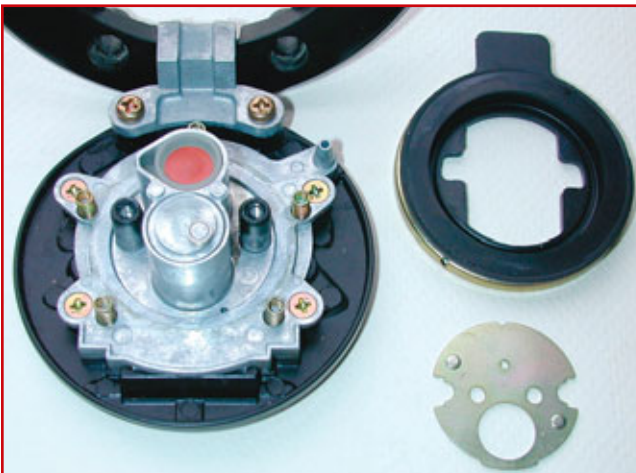
Continued from page 108



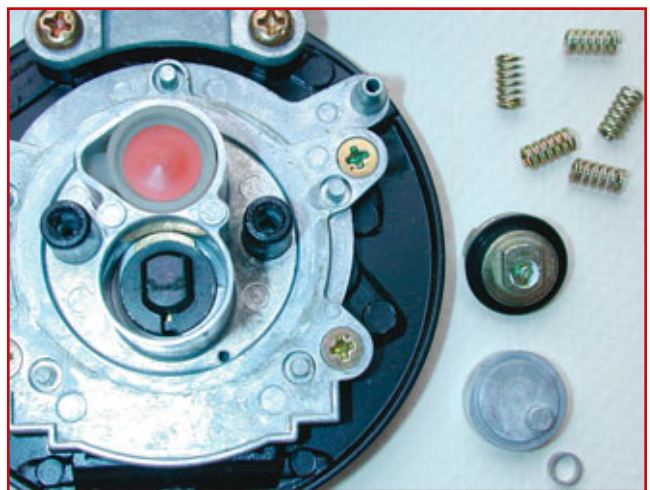
20. A clean rag has been stuffed into the filler neck to prevent anything from dropping into the tank and the mounting ring bolts were removed. Now remove one Phillips screw as shown and you can take the gas cap assembly to a workbench and remove the two Phillips screws that secure the locking bolt housing. The arrow points to a small gasket that is easily lost so be careful.



21. The locking bolt housing has been removed. The number on the housing is not the code.



22. The backing plate was removed and placed on the bottom. Then the compression ring and gasket were removed and placed on top.



23. The outer tailpiece was removed and placed on the bottom. Be careful and don't lose the small bushing that fits onto it. Then the inner tailpiece with the O-ring was removed and placed in the middle. The five compression springs were removed and placed on top. Now you can see the wafer retainer on the upper side of the plug. Depress it and push the plug out the front while being careful not to spill any wafers.

Specifications

Codes: Z5001-Z6000

Blank: Ilco: X103 (KA14); Curtis: KA16; Silca: KW7; Jet: KA-14NP

Spacing: 1=.098 2=.197 3=.295 4=.393 5=.492 6=.591

Depths: 1=.258 2=.238 3=.218 4=.199

Card Number: CMC50

DSD Number: 420

ITL Number: 259

Curtis: KA-1 cam & KA-1A carriage

Tumbler locations: 1 2 3 4 5 6

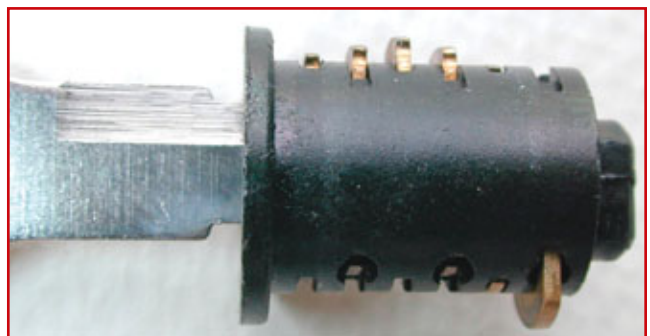
Ignition x x x x x x

Glove x x x x x x

Seat x x x x x x

Gas x x x x x

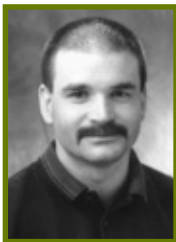
Helmet x x x x



24. The gas cap plug contains wafer tumblers in spaces 2-6 and the retainer. An X103 blank inserted into the plug shows the cuts are 23431. Progression the first space in the ignition to finish the key. Notice that this lock is tip-stopped, not shoulder-stopped.

Next month we conclude servicing the 2000 Kawasaki Concours by covering the seat lock, ignition/steering lock, and luggage locks. **TNL**

ELECTRONIC CONTROL ACCESS



by
William C. Deutsch

Even with all the attention electronic access control gets, some of you still haven't jumped in. Others of you have added EAC to your menu of services, but haven't made the money you had hoped for. I'm writing to help folks in both categories. If you haven't gotten involved yet, I hope this article will be the final encouragement. If the electronic part of your business hasn't grown like you wanted, this action plan may help you to increase profits by focusing your efforts.

There are three things that you can do to develop the electronic side of your business: prepare, sell the benefits, and seed the market. Let's break them down.

Prepare

John Henry may have been born with a hammer in his hand, but regular guys like us have to learn to use our gear. If you are a master with the pick and tension wrench, it's the result of long practice. The multimeter is no different. It's going to take time and preparation, but you can master the new skills that EAC demands. Here are a few ways to make your installations go smoothly and fine-tune your skills in the process:

1. Read the manual before you head out. This seems obvious, but it works. Most of us don't open the manual until we get into trouble. If you are installing a piece of gear for the first time, reading the manual before you're under the pressure of finishing the job will do wonders. If you skim the book before each subsequent install, you'll probably learn a new trick each time. That's how you grow.

2. Hook up and bench test the equipment before you leave the shop. It takes less time to do this than it does to fix problems in the field.

3. Study. Schedule time to read articles like the ones you find in *The National Locksmith*. There are some outstanding books in print as well as factory certification classes available. Make the time!

Another Hint: Start small. Your first job shouldn't be a networked system with integrated fire, burglar,

access control, and digital CCTV. I recommend getting your feet good and wet with a stand-alone system such as the SiteLine® Intelligent Lockset®. Over 50% of the stand-alone systems are sold by locksmiths, and with good reason. While you may have to acquire some new computer skills to sell and service them, stand-alones install much like mechanical locksets.

Sell the Benefits

The best sales tip I can give you is this: Sell the benefits, not the hardware.

If, when writing proposals, you routinely ask "would you like me to give you a price on electronics, too?" you'll get a few bites. But you'll get a lot of blank stares, too. Focus on what the electronics will do for your customer. When you are conducting a walk-through and see a room that holds high dollar inventory, say something like: "I can key this door so that you'll have a record of every one who enters." When you do that, you are selling one of the benefits of EAC, not a piece of hardware that your customer may not fully understand.

Here's another approach:

Ask your client if there are any areas where access needs to be restricted after hours. Then tell them that you can "key" those doors so that users can only enter during specified times. Isn't that more persuasive than, "Do you want electronics with that?"

Keep your eyes open for areas where the risk of lost keys is especially high. The benefit of an electronic product in this case is that keys can be deleted instantly. Look for areas—especially in perimeters—where eliminating a key blocks access to the entire facility, and suggest an appropriate electronic product.

Another opportunity for benefit selling comes when a customer asks you to cross key. You should explain that cross keying, while convenient for them, actually compromises the reliability of the cylinder. The real solution is to install an electronic lockset that can store hundreds of unique keys with no loss of security.

Finally, don't swing for the fences every time you go out selling. Yes, winning a bid for a 500 door access control system will give you a nice sales bump—if you've got the manpower and know-how to install it. But over time, hitting singles and

doubles will score more runs. If you can consistently add one Intelligent Lockset to every keying system you sell, it will be about the same as if you added fifteen mortise cylinders. That will certainly add revenue over the course of the year.

—The Dual Credential—

The most popular access control credentials are cards and codes, but they do have some security drawbacks. With a code you can easily lose any semblance of key control. While a code can't be physically lost, it can be given away or duplicated at whim. An employee tells their code to a friend, that employee tells a friend, who tells a friend, and so on and so on. The only way to prevent this is to train each employee how to protect their code, and then to rotate codes regularly. The bottom line is it takes re-education and new policies. That's not a bad thing, but the easier you can make it to integrate a security system with the users' habits and lifestyles, the less chance you have for a breach.

Cards are another example. While prox cards and smart cards have made a tremendous impact on security, there are some things to watch out for. Not long ago, I read about a break-in that involved a prox card. The cardholder kept the card in his glove box. The car was in for service over the weekend. Since the card had the company's name conveniently printed on it, a crooked mechanic lifted it and helped himself to some new computers. Why was the card in the glove box to begin with? Most likely, so that the owner wouldn't forget it. The point: inconvenience can often create a hole in security.

One answer is the SiteLine dual credential, so named because the electronic credential is attached to a high security mechanical key. Since most people are already used to carrying keys, they won't resort to measures like hanging the credential from their sun visor or tucking it in the glove box. Users who need access to both mechanical and electronic doors carry only one credential. Users who need only access to mechanical doors carry a bitted key, but if they ever need access to electronic doors, the upgradeable "bow" of their key can be removed and replaced with an electronic head. **Photograph 1**, shows a KeyMark® keyblank with an upgradeable head. Also shown is a BiAxial® cut key with the electronic head detached. As you can see, turning a Medeco key into an electronic credential is as simple as removing one rivet and swapping heads.



1. A KeyMark® keyblank with an upgradeable head.

—Seed the Market—

The dual credential also works for your business. The upgradeable or "seeding" keys can be used on every job, regardless of whether electronics are incorporated. The seeding keys, however, carry the message "Upgradeable to Electronics" on the head, and your name and number stamped on the bow. It's a constant reminder of the services you perform. And, when the time comes to add electronics to a facility, the users are already holding the key, making it easier to integrate the enhanced security into their lifestyle. **Photograph 2**, shows the SiteLine seeding key.




2. The SiteLine seeding key.

—Summary—

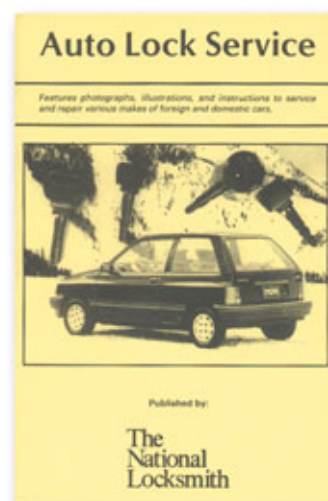
If you're thinking about moving into electronic access control—and you should be—here is an action plan to get you moving in the right direction.

1. Train
2. Sell the benefits
3. Seed the market

If you have any questions or anecdotes about your EAC challenges and successes, I'd love to hear them. I'll try to pass on anything that might be helpful in these pages.

William C. Deutsch is Technical Support Engineer for Medeco High Security Locks. For more information, or to comment on this article, you can reach Mr. Deutsch at EAC@Medeco.com. 

Auto Lock Service



Covers opening and service techniques.

CLICK HERE TO LEARN MORE



#ALS - 1

BUSINESS BRIEFS

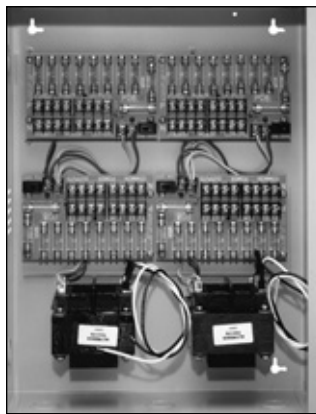
MBA USA, Inc On New Website

A new website from MBA USA devoted entirely to safe locks is now up and running. Log on to safe-locks.com to browse and buy virtually any currently manufactured safe lock. In addition to locks, the site features safe parts, lock parts, safe deposit locks, and keys. Qualified buyers receive substantial discounts when they register on the site. New products are continually being added, so if you don't find exactly what you are looking for, just E-mail or call to speak directly with one of MBA's lock experts.

For more information E-mail: mbatools@aol.com, or call (888) 622-5495 or (859) 887-0496.

Security Lock Distributors Handles Altronix

All Altronix power supply/chargers and related accessories for CCTV, security, fire, and access control applications are now



available from all Security Lock warehouse centers. General-purpose units range from 6 to 24 VDC in output and from 750mA to 10+ Amps. Many models are available with AC and battery supervision. In addition, Security also

inventories ADA compliant UL listed Access Control power supply/chargers with multiple outputs capable of providing power for a great number of devices simultaneously.

For additional information call: (800) 847-5625; Fax: (800) 878-6400; E-mail: info@seclock.com.

Perma-Vault Relocates

Perma-Vault Safe Company has relocated to larger facilities to accommodate corporate growth and additional warehousing of its all-American manufactured products. The new facility is at 72 Ash Circle, Warminster, PA 18974.

The toll-free phone remains the same, (800) 662-3360; however the local lines have changed to: (215) 293-9951; Fax: (215) 293-9952.

New Books from ASIS International

ASIS International has released four new books: Cargo Theft Prevention: A Handbook for Logistics Security (\$45 members, \$55 nonmembers); Retail Security: 150 Things You Should Know (\$42 members, \$50 nonmembers); Contraband, Organized Crime, and the Threat to the Transportation Supply Chain Function (\$18 members, \$20 nonmembers); and Crime Prevention for Houses of Worship (\$35 members, \$40 nonmembers).

The ASIS online bookstore offers over 300 security-related books, videos, and CD-ROMs from many different publishers.

For more information call: (703) 519-6200; Web: www.asisonline.org.

ASSA ABLOY Appointments

Marc Freundlich has been named Vice President of Business Development for ASSA Abloy's Identification Technology Group's (ITG) Card Manufacturing Center of Excellence. Freundlich was previously President of Visonic USA.

Carl Hellman has been appointed to the position of vice president of distributor relations for ASSA ABLOY North America. In this newly created position at ASSA ABLOY, Carl will apply and utilize his vast experience in developing new business and enhancing customer relationships in the building products industry.

IR Recognition Systems Partners with Access Hardware Supply

IR Recognition Systems, the biometric component of Ingersoll-Rand's (IR) Security & Safety Group's Electronic Access Control Division (EACD), announced that national wholesaler



distributor Access Hardware Supply (San Leandro, Calif.) will be handling its biometric HandKey II hand geometry readers. Access Hardware Supply calls on electrical and mechanical hardware dealers throughout North America.

Aiphone Appoints Regional Sales and Support Manager


Aiphone Corporation has appointed Spencer Britenstine as Regional Sales and Support Manager Mid Western Region.



Britenstine is responsible for managing Aiphone's three independent sales representatives in his territories, which include Indiana, Kentucky, Michigan, Ohio, Western Pennsylvania and West Virginia.

Diebold's PassVault™

Diebold Incorporated has leveraged the convenience of biometric hand geometry, which positively identifies people instead of their keys, cards or codes. With IR Recognition Systems' HandKey II®, Diebold's PassVault™ creates a self-service safe deposit box system at the new East Memphis branch of the First Tennessee Bank. PassVault™, a biometric-based self-service safe deposit box system, is producing two-fold results: Customers are getting to their safe deposit boxes faster, and the bank no longer needs to staff personnel exclusively to administer customers in and out of the vault.

For more information contact Bill Spence at: (408) 341-4100, or E-mail: bill_spence@irco.com. 

FREE Code Cards!

from The National Locksmith®

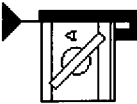
COLLECT 'EM ALL!!

Spaces		Depths		Cutter: CW-1011		IC #: 903	
mm	Inch	mm	Inch	Jaw: A	Series	Original	
1	2150	846	1	820	323	50000-69999	
2	2010	791	2	755	297		
3	1800	709	3	690	272		
4	1660	654	4	625	246		
5	1450	571					
6	1310	516					
7	1100	433					
8	960	378					
9	750	295					
10	610	240					

Key Blank Mfr.

Boerkey	162300T10
Errabi	TO4TY37RP
Ilco	TOV43AT4
Jet	TR47-PHT
Orion	T10TV51A
Silca	TOV43AT4

Blank #

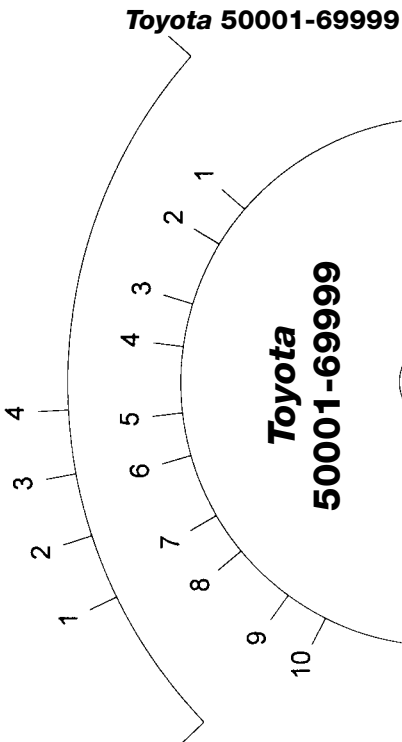


Align: Black horse shoe tip stop

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The National Locksmith®

Toyota 50001-69999



**Toyota
50001-69999**

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WH Software

InstaCode

Cut Along Outside of Card and Laminate To Use

Spaces		Depths		Punch		IC #: P903	
mm	Inch	mm	Inch	Jaw: A	Series	Original	
1	2150	846	1	820	323	50000-69999	
2	2010	791	2	755	297		
3	1800	709	3	690	272		
4	1660	654	4	625	246		
5	1450	571					
6	1310	516					
7	1100	433					
8	960	378					
9	750	295					
10	610	240					

Key Blank Mfr.

Boerkey	162300T10
Errabi	TO4TY37RP
Ilco	TOV43AT4
Jet	TR47-PHT
Orion	T10TV51A
Silca	TOV43AT4

Blank #

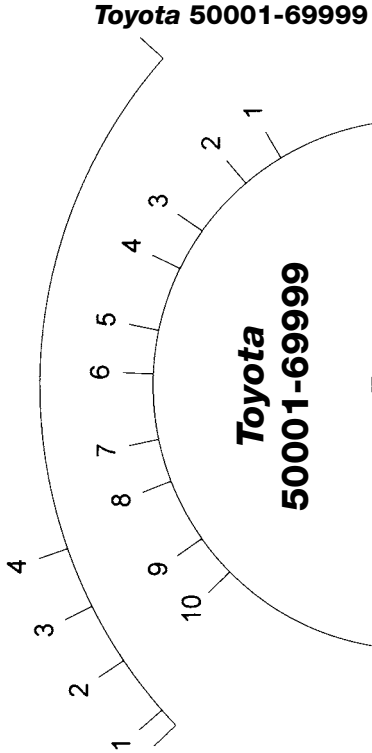
Insert key such that face of jaw meets key profile

Align: Tip stop (Left Insertion)

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The National Locksmith®

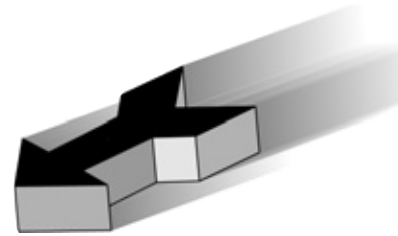
Toyota 50001-69999



**Toyota
50001-69999**

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WH Software

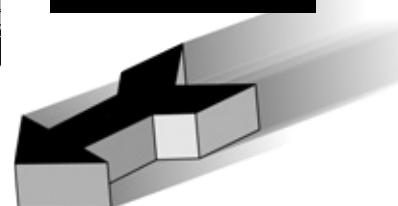
InstaCode



BONUS Code Card

For the 1200CMB™

Flip 'em over for
Silca,
Curtis,
Framon,
A-1
and
ITL specs!



Code Card

For the 1200PCH™

Courtesy of
INSTA-CODE 2002™ from
The National Locksmith

Toyota 50001-69999

HPC 1200CMB™

HPC Code Card: CF307 Cutter: CW-47MC
Jaw: A Gauge: From tip

Silca Unocode

UnoCode Card No.: 1420

HPC Codemax™

DSD: 176
Jaw: A

Cutter: CW-47MC

Curtis No. 15 Code Cutter

Cam Set: N/A
Carriage: N/A
Clipper: N/A

Framon

Cuts Start At: 404 Cutter: N/A
Spacing: .0551 / .0826 Alternating
Block #: N/A Depth Increment: .0255
Key Clamping: Key aligned using left side of vice /
spacing clip

A-1 Pak-A-Punch™

Quick Change Kit: N/A
Punch And Die: N/A

ITL 9000 & 950

ITL Manufacturer ID: N/A

ECM 200

N/A

Toyota 50001-69999

HPC 1200PCH™

HPC PCH Card: N/A Punch: N/A
Jaw: N/A

Silca Unocode

UnoCode Card No.: 1420

HPC Codemax™

DSD: 176
Jaw: A

Cutter: CW-47MC

Curtis No. 15 Code Cutter

Cam Set: N/A
Carriage: N/A
Clipper: N/A

Framon

Cuts Start At: 404 Cutter: N/A
Spacing: .0551 / .0826 Alternating
Block #: N/A Depth Increment: .0255
Key Clamping: Key aligned using left side of vice /
spacing clip

A-1 Pak-A-Punch™

Quick Change Kit: N/A
Punch And Die: N/A

ITL 9000 & 950

ITL Manufacturer ID: N/A

ECM 200

N/A

KEY CODES

Toyota, Part 6 50001-69999

Special Note: There has been a change in information regarding the Toyota 50001-69999 code series. The specification information and code cards have all been updated. Please disregard the previous specification info and code cards given. Replace with new information presented here.

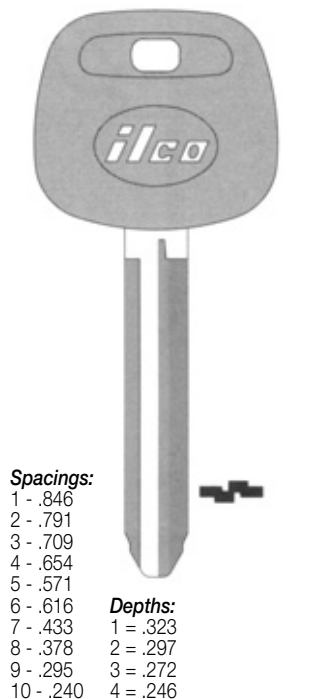
Manufacturer: Toyota
Code Series: 50001 - 69999

Key Blanks:
Boerkey: 162300T10
Errebi: T04TY37RP
Ilco: TOY43AT4
Jet: TR47-PHT
Orion: T10TY51A
Silca: TOY43AT4

Number of Cuts: 10
M.A.C.S.: 2
Key Gauged: Tip
Center of First Cut: .846
Cut to Cut Spacings:
.0551/.0826 Alternating
Cut Depth Increments: .0255

HPC 1200CMB
Code Card: CF307
Jaw: A
Cutter: CW-47MC
Gauge From: Tip
HPC 1200PCH (Punch):
PCH Card: N/A
Punch: N/A
Jaw: A
Silca UnoCode
Card Number: 1420
HPC CodeMax
DSD #: 176
Jaw: A
Cutter: CW-47MC
Curtis No. 15 Code Cutter:
Cam-Set: N/A
Carriage: N/A

Framon #2:
Cuts Start at: .404
Cut to Cut Spacing:
.0551/.0826 Alternating
Block #: N/A
Depth Increments: .0255
Key Clamping Info: Key aligned
using left side of vise/spacing
clip.
A-1 Pack-A-Punch
Quick Change Kit: N/A
Punch: N/A
Die: N/A
ITL 9000 & 950
Manufacturer ID: N/A
ECM 200
N/A

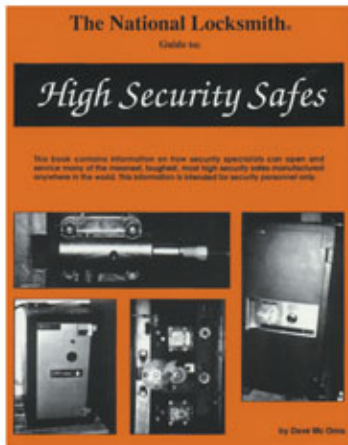


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64122	4334223422	64164	1234213344	64206	433344312	64248	2133223312	64290	2133124312	64332	2233113312
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64124	3234223344	64166	3234213332	64208	2233443243	64250	3433223232	64292	3433123443	64334	4333113232
64125	2234223343	64167	2334213321	64209	1233443232	64251	2233222344	64293	2333123434	64335	3233112344
64126	1234223334	64168	2234213312	64210	4333442311	64252	1233222334	64294	2133123432	64336	2233112334
64127	4334223321	64169	2134213311	64211	3233442243	64253	3433222311	64295	1133123423	64337	1233112312
64128	3434223312	64170	1234213244	64212	2233442134	64254	2333222134	64296	3433123421	64338	3433112244
64129	3334223311	64171	1134213243	64213	1233442133	64255	2133222133	64297	2333123344	64339	2333112243
64130	3234223244	64172	4334213233	64214	4333442121	64256	4333222121	64298	2133123321	64340	2133112234
64131	2334223243	64173	3334213232	64215	3233434423	64257	2333221243	64299	1133123312	64341	1133112134
64132	2234223234	64174	3234213223	64216	2233434312	64258	2133221132	64300	3433123244	64342	3433112132

Toyota, Part 6 50001-69999

64343	2333111244	64357	3232443422	64371	2332443221	64385	3332442133	64399	3432434332	64473	3432324443
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High Security Safes Volumes 1 & 2



Learn to open High Security Safes now!

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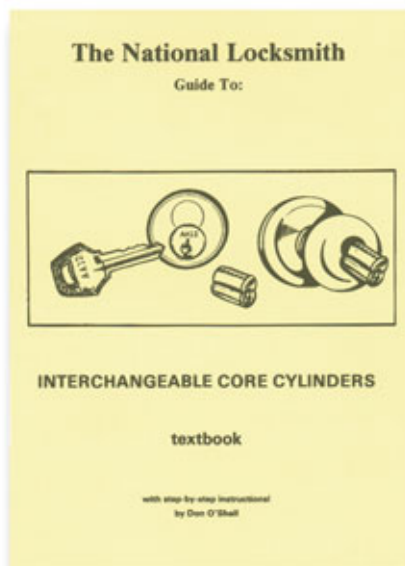
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Toyota, Part 6

50001-69999

64547	3332223422	64621	1223443422	64695	2123322121	64709	1123234312	64723	3423233222	64737	1223232132
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Interchangeable Core Cylinders



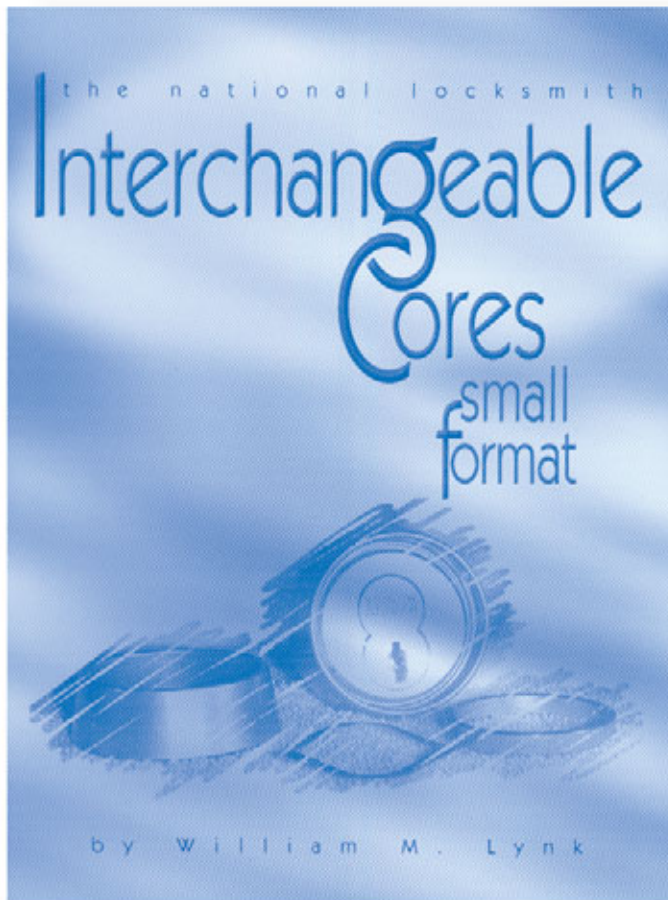
Covers all this...

- Best/Falcon/Arrow/Eagle/(A2) • Best A3
- Best A4 • Corbin X Removable Core
- Corbin Z Removable Core
- Russwin Removable Core
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#ICB - 1

IC Cores: Small Format



Everything you ever need to know about how to
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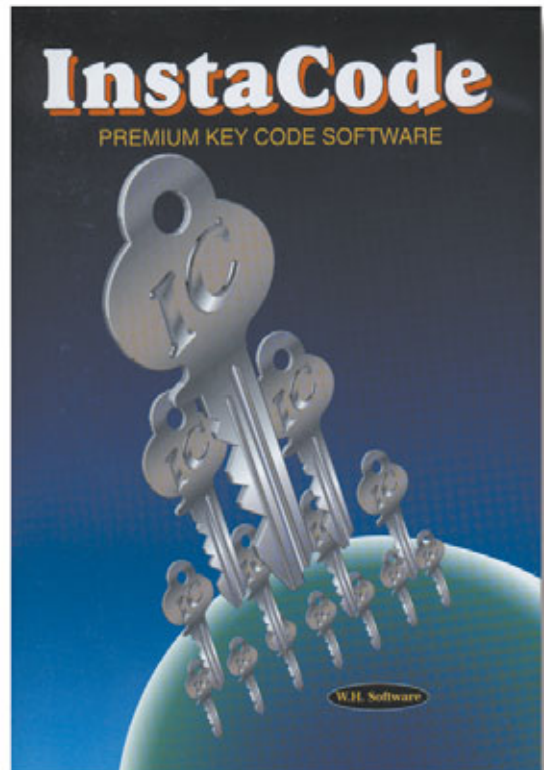
Toyota, Part 6 50001-69999

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Toyota, Part 6 50001-69999

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64905	2122433443	64939	3222431221	64973	2122324423
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InstaCode

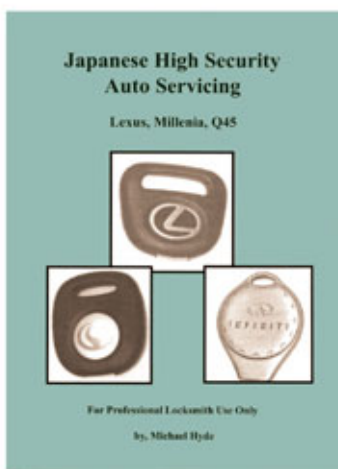


The latest release of InstaCode, includes over 5000 code series covering general/utility, padlock, vehicle and motorcycles.

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#IC - 2003

Japanese High Security

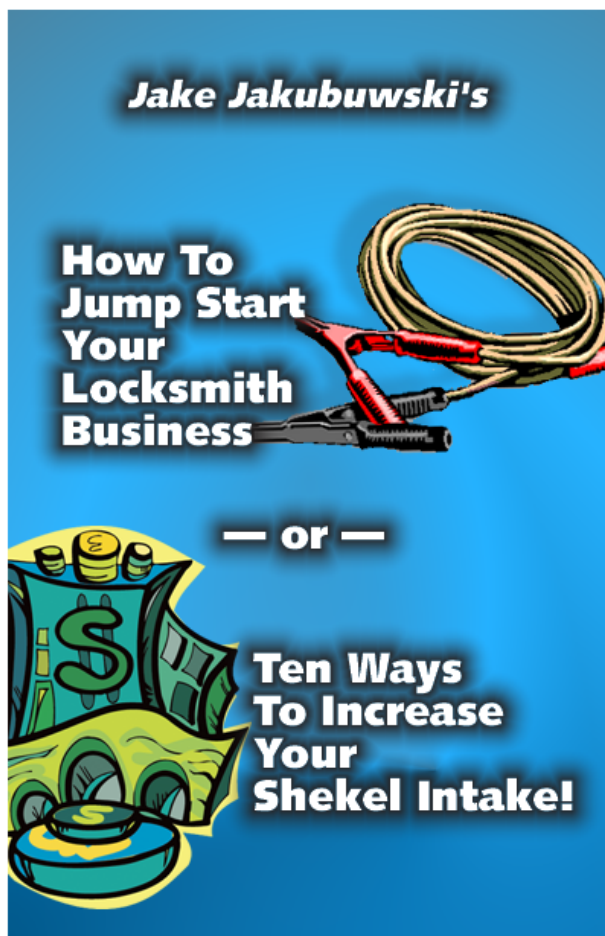


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#JAP - 1

How To Jumpstart Your Business



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#JUMPSTART

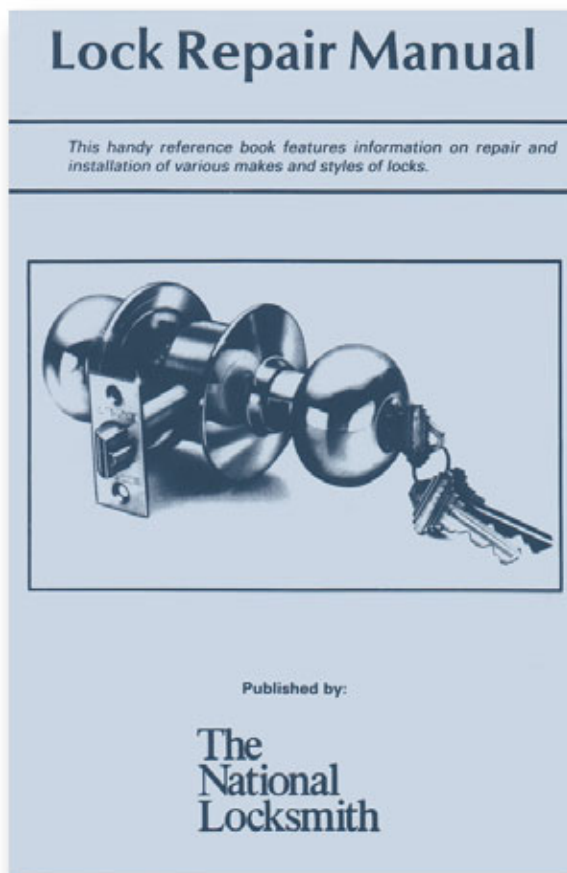
Toyota, Part 6 50001-69999

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Toyota, Part 6 50001-69999

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65222	2121223421	65296	1112442312

Lock Repair Manual



Here, under one cover you have a tremendous amount of lock servicing information. Next time you run into a problem chances are you'll find the answer in the Lock Repair Manual.

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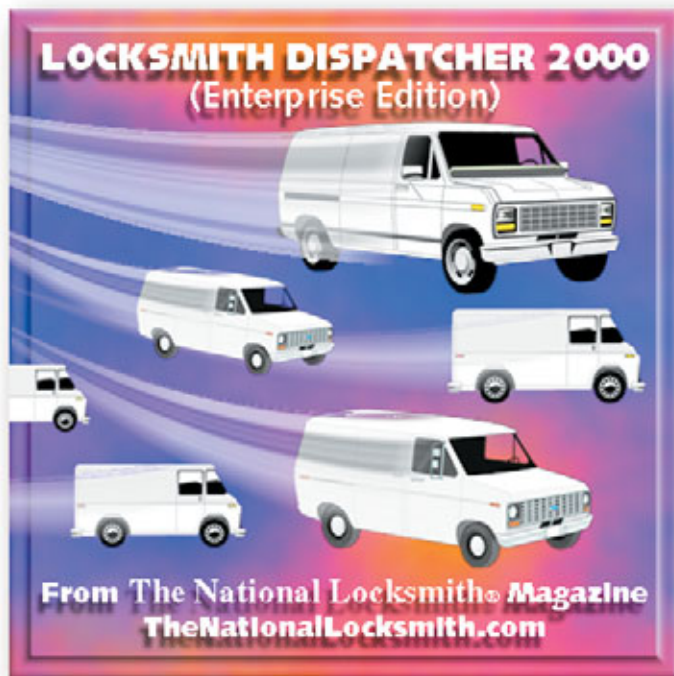
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Toyota, Part 6

50001-69999

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Locksmith Dispatcher 2000



Controlled Service dispatching software
specifically for the locksmith!

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THRU THE KEYHOLE

A Peek at Movers & Shakers in the Industry

ATTENTION MANUFACTURERS AND DISTRIBUTORS:

Would you like your company and products to be profiled in *Thru The Keyhole*? Please call Editor, Greg Mango, at (630) 837-2044.

Norton Door Controls

120-year-old Norton door closer presented for preservation and display.

In a ceremony conducted at the Norton Door Controls manufacturing facility, Bill Keohane, president, Steeltech Building Products (South Windsor, Conn.), presented Doug Millikan, general manager, Norton Door Controls, with a Norton brand door closing device dating back to 1882. The circa 1880's door closer is a unique product and among the first of its kind.

The door closer will be appropriately displayed at Norton Door Controls located at 3000 Highway 74, Monroe, N.C.

This particular product was among the first door closing devices to be designed and manufactured by Lewis C. Norton, founder of the Norton Door Check & Spring, Boston, Mass., in 1880. The company would eventually become Norton Door Controls. The 120-year-old closer was removed from a Boston church during a building renovation in 1987.

The fact that the door closer was removed from a church is of real interest. As the story goes, in the early 1880's, a Boston Trinity Church priest actually asked Norton for assistance in manufacturing a device to keep the large church doors from making noise when closing. He wanted to avoid the obvious disruptions during services. The rest, as we say, is history.

The door closer was patented (No. 251,790) on January 3, 1882, by Norton.

For more information on Norton, call: 800-438-1951 or visit their Web site at: www.yalesecurity.com. **YAL**



Pictured from left to right is: Ken Tursam, Design Manager, Norton; Doug Millikan, Plant Manager, Norton; Jerry Scully, Engineering Manager, Steeltech Building Products, Inc.; Dave Gray, Factory Manager, Norton; and Bill Keohane, President, Steeltech Building Products, Inc.

Pocket InstaCode



Pocket InstaCode has all the important features of the InstaCode program, packed into a program small enough to run on a Pocket PC.

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WEB REVIEW

Adesco Safe Manufacturing Co.

<http://www.adesco.com>

This site shows you how to choose the right safe for any particular application. Categories include Home & Small Business Floor Safes, Business Depository Safes, Fire Safes, Commercial Floor Safes, Burglar & Fire Protection Safes, Free Standing Safes, Wall Safes and more.

A comprehensive article by Earl Halls explains in detail the various safe ratings. A handy What's New button allows you to instantly see the latest company news. At the time of this visit, Adesco was introducing new lower pricing on their popular line of Burglar Fire safes.

One really nice feature of this site is the online catalog. You can easily see all the specs on every safe, and even print pages out to use when showing product to customers. The entire site is well designed and will give you complete details not only on Adesco's products, but will also give you an education on safes as well.

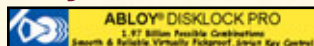


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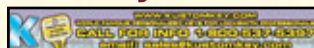
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McDonald DASH Locksmith Supply



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Monaco Lock



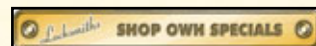
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National Auto Lock Service, Inc.



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SecuraKey



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Select Products Ltd.



www.select-hinges.com

Sieveling Products Co.



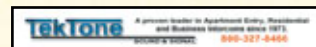
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TEST DRIVE!

We've all encountered it... you walk up to a commercial building, swing open the door and no sooner cross the threshold, when the door slams shut behind you. You look to see if there is an overhead surface door closer and find that there is, meaning one of two things is probably wrong; Either the closing speed valve needs adjusting, or the seals in the closer are shot and it needs replacing. Odds are, the seals are shot and the closer needs to be replaced.

As you know, door closers endure tremendous use and abuse. This is good for you because it means more service opportunities, and when it comes to door closers, there's no shortage of service opportunities.

PRODUCT:

American Eagle Lock Co.,—a relatively new company,—is offering a few door closers in three finishes for when those service opportunities arise. The A3100 series of door closers are designed for overhead surface mounted applications on door widths from 2'8" to 4'. For most standard applications, you are sure to find a closer that applies.

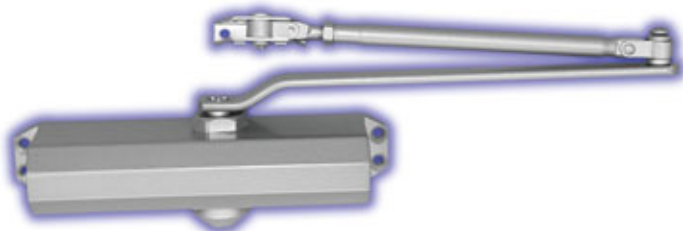
FEATURES:

American Eagle Lock Co., offers both sized and non-sized closers. Each designed for a specific door size and weight.

The A3101 series is non-handed and size adjustable from 1–4.

The A3100 series is non-handed and size adjustable from 3–6.

A3100 Series Door Closers



by American Eagle Lock Co.

The A3102 series is non-handed and sized a number 2.

The A3103 series is non-handed and sized a number 3.

The A3104 series is non-handed and sized a number 4.

The A3105 series is non-handed and sized a number 5.

All listed closers offer simple installation on wood, metal and aluminum doors using the standard mounting hole patterns common to other manufacturers. All A3100 series closers are designed to be mounted in a standard or top jamb installation, however, a parallel arm installation can be achieved with the use of an optional mounting bracket.

All closers feature adjustable latching speeds, adjustable closing speeds, adjustable backcheck, and a 5-year limited warranty. Sprayed finishes are available in aluminum, dark duranodic bronze and gold.

The A3102, 3103, 3104, and 3105 compares and will retrofit standard mounting patterns for Yale 50, Norton 1600, Dorma 642 and Global TC200. The A3100 and A3101 compares and will retrofit standard mounting patterns for, Yale 51BF, Norton 1601BP, Dorma 641 and Global TC201ADA.

Some of the available accessories are: a parallel arm bracket; hold open arm; door saver arm; backplate; drop plate; drop plate cover; angle bracket; and a narrow frame bracket.

CONSTRUCTION:

The unit is constructed from die cast aluminum and is UL Listed, exceeding 2,000,000 cycles. Internally it features a rack and pinion with a large flat tooth design, and comes standard with all temperature hydraulic fluid and pressure release valves for long life.

PRICE:

Depending on the model, the suggested retail prices range from \$110.00 to \$114.00.

CONCLUSION:

The American Eagle A3100 series of door closers is an economic, simple solution for what may otherwise be an expensive proposition. Will these closers operate and last as long as other similar brand name closers? Well, the cycle test indicates that they should, however they haven't been out long enough to get field test reports, so only time will tell. Other manufacturers closers do carry a better warranty, they also carry a much heftier price tag as well.

For more information contact:
American Eagle Lock Co.
144 Newport Road
Leola, PA 17540
Phone: (717) 656-0174 or
(866) 874-3662
Fax: (717) 656-0818
Web: americaneaglelockco.com



IN SUMMARY:

DESCRIPTION: The A3100 is a standard surface mounted door closer.

PRICE: \$110.00–\$114.00.

COMMENTS: There are six models to choose from in both sized and non-sized configurations.

TEST DRIVE RESULTS: The closers have a clean appearance, seem to be well made and are UL listed.